488

SPAWNING GROUND CATALOG OF THE KVICHAK RIVER SYSTEM, BRISTOL BAY, ALASKA

Compiled by

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SPAWNING GROUND CATALOG OF THE KVICHAK RIVER SYSTEM, BRISTOL BAY, ALASKA

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ABSTRACT

Information about the red salmon runs and the spawning streams and beaches in the Kvichak River system, Bristol Bay, Alaska, is cataloged in this volume. The material is compiled from data obtained from spawning ground surveys made in the area since 1955 by the Fisheries Research Institute of the University of Washington. Earlier work was financed by the salmon canners of Bristol Bay. In recent years the work was supported by the Bureau of Commercial Fisheries.

For each spawning stream or beach, the catalog gives, whenever available, the stream catalog number, name, location, and physical description, including dimensions, bottom quality, flow, barriers, etc. Then a description of red salmon runs to the area is listed, including magnitude of the run and timing and distribution of spawning. Estimates of numbers of red salmon to each stream or beach are listed chronologically under a separate entry entitled "Summary of Surveys."

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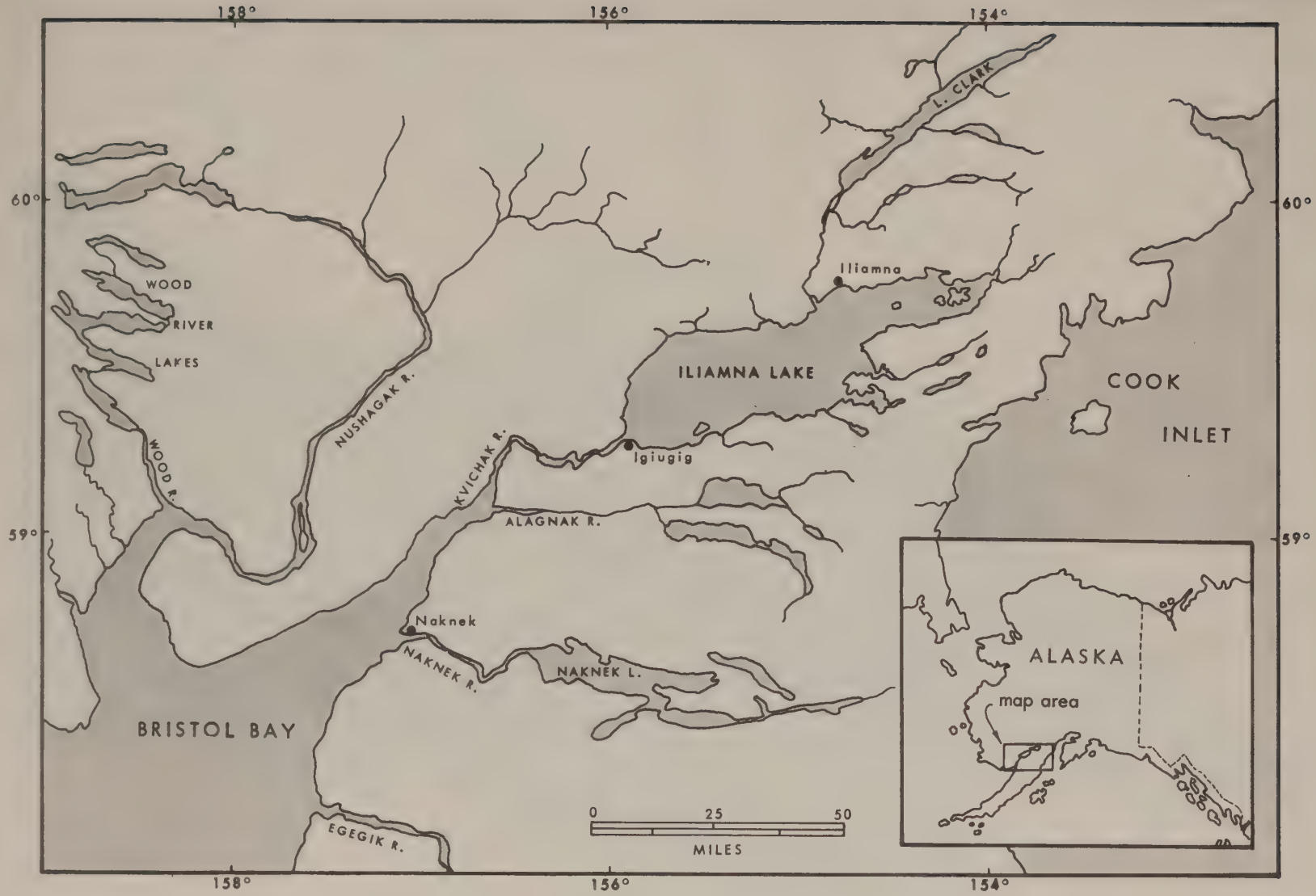

Figure 1. Kvichak River system of Bristol Bay, Alaska.

Figure. 2. Known beach spawning areas of Iliamna Lake, Alaska.

Figure. 3. Stream spawning areas of western half of Iliamna Lake, Alaska.

Figure 4. Stream spawning areas of eastern half of Iliamna Lake, Alaska.

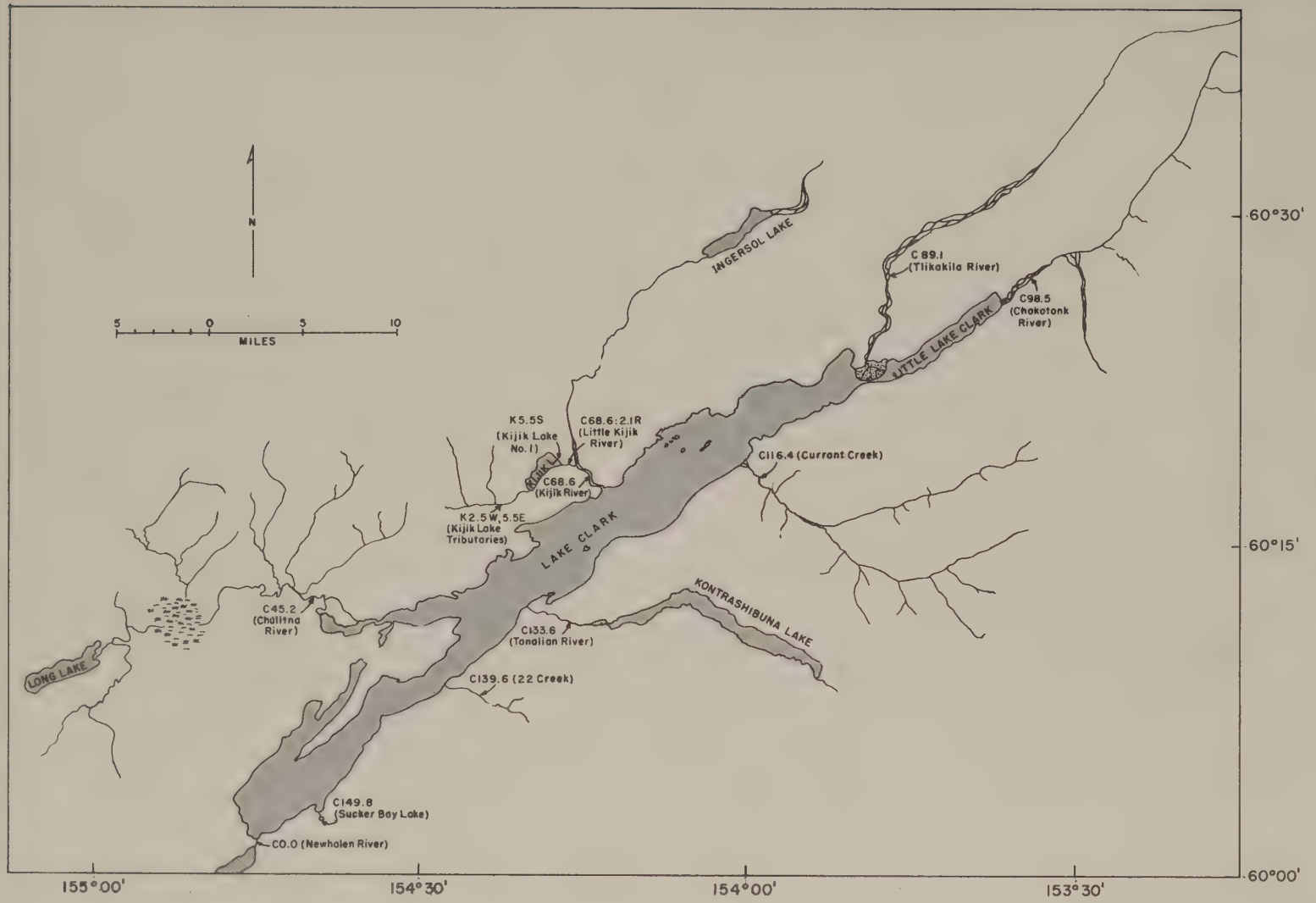

Figure. 5. Spawning areas of Lake Clark, Alaska.

SPAWNING GROUND CATALOG OF THE KVICHAK RIVER SYSTEM, BRISTOL BAY, ALASKA

INTRODUCTION

The Kvichak River system is the major contributor to the important red salmon fishery in Bristol Bay, Alaska. From 1932 through 1962, the Kvichak-Naknek fishery contributed about 60 percent of the total Bristol Bay catch. During the period 1955-62, the Kvichak River system alone had an estimated average total run (catch plus escapement) of more than 8¼ million red salmon.

Since 1955 the Fisheries Research Institute (FRI) has surveyed spawning grounds to determine distribution of fish. During 1961 and 1962 the surveys were enlarged to include measurements and estimates of spawning area utilized and potential spawning area. These additional observations were made in order to estimate carrying capacity of Kvichak spawning grounds.

To date 71 stream and pond areas and 23 beach areas have been surveyed and cataloged. This catalog includes all stream and pond areas utilized by the fish, with one or two possible and minor exceptions. Extensive surveys of beach areas did not begin until 1960, and several of these areas may be omitted from the catalog.

Since 1955, FRI has studied spawning grounds under a Saltonstall-Kennedy contract administered by the Bureau of Commercial Fisheries (BCF). Between 1950 and 1955, FRI, financed by salmon canners of Bristol Bay, made occasional spawning ground surveys. Prior to 1950, infrequent surveys of parts of the Kvichak River system were made by the BCF. These are recorded in "Reports of the Commissioner of Fisheries to the Secretary of Commerce, Alaska Fishery and Fur Seal Industries." This present catalog contains spawning ground information collected during these three periods, thus providing interested management and research agencies with the data under one cover.

Early in 1960, a tentative spawning area catalog was compiled by D. R. Heinle and H. D. Smith. The format of this catalog was later changed to accommodate additional and more detailed information, resulting in the present form compiled by R. L. Demory and R. F. Orrell. Field observations were made by C. D. Becker, Demory, J. R. Gilbert, Heinle, O. E. Kerns, Jr., O. A. Mathisen, Orrell, L. A. Phinney, Smith,and P. E. Wright. In addition, many temporary workers aided in data collection.

Special acknowledgment is made to Oren B. Hudson, pilot and owner of Iliamna Airways, who provided excellent help and flying service for aerial surveys.

MAPS

Five maps are presented in this catalog. The first (fig. 1) is a map showing the Kvichak District of Bristol Bay, Alaska. Figures 2-5 are maps of Iliamna Lake and Lake Clark. Each map shows the number and name of those streams included in the catalog.

EXPLANATION OF CATALOG FORMAT

Stream and Beach Designation

Stream number.--The stream designation in the upper left-hand corner of each page consists of a letter followed by a number. The letter designates the lake into which the stream flows or from which it originates (connecting streams between lakes). The number represents the distance in miles and tenths of a mile of the stream mouth (or beach, as the case may be) from the outlet of the lake measured along the shoreline in a clockwise direction. The measurement is to the center of the stream mouth (or beach).

A tributary of the trunk stream is designated by a number separated from the stream number by a colon. The number represents the distance in miles and tenths of a mile of the tributary from the origin of the trunk stream. The "R" or "L" after the tributary number indicates whether the stream enters from the right or left of the trunk stream (facing downstream).

Lakeshore beaches have the same designation as streams. An island beach is designated in a different fashion. The number following the lake designation represents the mileage in a straight line from the outlet of the lake to the northernmost (true north) point of land. This is followed by a colon, "I" (for island), and a number representing the extent of the spawning beach, which is in miles and tenths of a mile in a clockwise direction around the island from the northernmost point.

Lake letter designations used in this catalog are as follows: I = Iliamna Lake; G = Gibraltar Lake; C = Lake Clark; and K = Kijik Lake.

Stream name.--The name is at the center top of each page. The lake or river system of which the spawning area is part follows the stream name in parentheses. Names from U.S.G.S. maps are used when available, otherwise local names are used.

Location.--The north latitude (N.) and west longitude (W.) are given for each stream, pond, or beach in degrees (°), minutes (′), and seconds (″). For lakes, the latitude and longitude of the outlet are given.

Previous names or numbers.--A previous name or number is given when available.

U.S.G.S. map.--The maps most frequently used are Iliamna, Alaska, and Lake Clark, Alaska, scale 1:250,000. Maps of 1:63,360 scale are indicated when available.

Physical Description

Total length of stream.--Expressed in miles and tenths of a mile measured with a planimeter from the map.

Length accessible to salmon.--The length of stream ascended by salmon either to the headwaters or to a permanent blockage.

Average width and range.--The average width and range in feet as determined from the survey.

Average depth and range.--The average depth and range in inches as determined from the survey. Average depth was determined where a flow measurement was taken. Range applies to depths for the entire stream.

Total accessible spawning area.--The total accessible area in acres and square yards.

Potential spawning area.--The spawning area in acres and square yards. Potential spawning area was determined by deducting from total accessible area the percentage of nonspawnable pools, riffles, and areas made nonspawnable by water velocities exceeding 5 feet per second (fps).

Potential spawning area for beaches has not been determined. Area utilized is given for beaches as determined in 1961.

Bottom quality.--The mean percentage of different bottom types as determined from the survey. Bottom type (gravel size) was arbitrarily chosen as <1/8", 1/8"-3", 3"-12", >12", and unknown.

Watershed.--A brief description of the watershed and stream. Such things as drainage area (to the nearest square mile as determined from contour maps with a compensating polar planimeter), type of valley (glacial, stream-cut, etc.), vegetation, flooding, source, and obstructions are included.

Gradient.--Given in feet per mile as determined from contour maps. Field gradient measurements have not been made.

Water velocity.--Given in fps and determined when a flow measurement was given.

Flow and range.--Discharge in cubic feet per second (cfs), usually determined near the mouth of creeks. Date and place of measurement and relative stage of stream level are indicated when known.

Air temperature.--Given in degrees centigrade along with date of measurement.

Water temperature.--Given in degrees centigrade along with date of measurement.

Pools and riffles.--Distribution, abundance, and size of pools and riffles, though desirable, were not available. These data should be gathered at a future date.

Red Salmon Runs

Percent of total escapement.--The peak spawning ground count in a stream expressed as a percentage of the total escapement. Four categories are used: <1%, 1-4%, 5-9%, 10% or more. The date of peak count is also included.

Escapement range.--Minimum-maximum escapement to a particular spawning area.

Time of occupancy.--The period of time the spawning area is occupied by red salmon.

Peak of spawning.--The period of time when the most red salmon are spawning.

Distribution of spawners.--The distribution of spawning salmon determined from all available information.

General Information

Shelter.--Information regarding the shelter (boat anchorage, camp facilities, etc.) available at the different spawning areas.

Survey routes and methods.--Information regarding visibility from air and ground, accessibility on foot and from boat.

Personal-use fishery.--Information on the local personal-use fishery.

Fish species.--Fish species observed other than red salmon.

Wildlife species.--Mammals and birds observed as recorded by stream and survey crews.

Remarks.--Information of miscellaneous nature.

Summary of Surveys

Date surveyed.--Surveys are listed chronologically.

Method and distance.--Distance of survey when available is given in miles and tenths of a mile. In some cases, such as some spring ponds, distance is designated by "all." Preceding the distance are the letters A, G, or S. These symbols signify aerial, ground, or scuba survey.

Live.--The number of live red salmon observed during a particular survey.

Dead.--The number of dead red salmon observed during a particular survey.

Total.--The number of red salmon when a distinction between live and dead was not made.

Remarks.--Pertinent information regarding the survey. Included are number of fish off mouth and samples collected.

I 0.0 KVICHAK RIVER (Iliamna Lake)

LOCATION: 59°04'54" N. 155°53'06" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, Alaska, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 15.3 miles to Otter Island

LENGTH ACCESSIBLE TO SALMON: 15.3 miles

AVERAGE WIDTH: 1,000' | RANGE: 300'-2,300'

AVERAGE DEPTH: 60" | RANGE: 48"-360"

TOTAL ACCESSIBLE SPAWNING AREA: 8,992,720 square yards (1858.0 acres)

POTENTIAL SPAWNING AREA: 50%, 4,496,360 square yards (929.0 acres)

BOTTOM QUALITY: Good spawning gravel from Otter Island to Pecks Creek. Bottom unstable from Pecks Creek to Iliamna Lake.

WATERSHED: 8,000 square miles. Shallow river-cut valley through open rolling tundra. Willow along entire stream. Source, Iliamna Lake 20 miles x 80 miles.

GRADIENT:

WATER VELOCITY: 4-5 fps

FLOW: 18,000 cfs (estimated) RANGE:

AIR TEMPERATURE: 16.7° C. average for July 1960 (29 readings)

WATER TEMPERATURE: 12.0° C. average for July 1960 (25 readings)

POOLS AND RIFFLES:

I 0.0 KVICHAK RIVER (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT:

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat, available just inside outlet.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Ground survey impossible without boat.

PERSONAL-USE FISHERY: Heavy annual personal-use fishery at Igiugig.

FISH SPECIES: Kings, chums, pinks, rainbow, grayling, northern pike, whitefish.

WILDLIFE SPECIES:

REMARKS:

I 0.0:6.0L PECKS CREEK (Kvichak River)

LOCATION: 59°17'54" N. 156°03'24" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, Alaska, 1:250,000; Dillingham, Alaska, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 22.5 miles

LENGTH ACCESSIBLE TO SALMON: 22.5 miles

AVERAGE WIDTH: 20' | RANGE:

AVERAGE DEPTH: | RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 264,264 square yards (54.6 acres)

POTENTIAL SPAWNING AREA: 10%, 26,620 square yards (5.5 acres)

BOTTOM QUALITY: Mud bottom in lower 5 miles, some gravel beyond.

WATERSHED: 70 square miles. Shallow stream-cut valley through open rolling tundra. Willow along banks. Stream meanders throughout its length. Source: surface runoff, numerous lakes, and marshes.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 0.0:6.0L PECKS CREEK (Kvichak River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT:

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter at mouth of creek.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to brown-colored water. Has not been observed from the ground beyond 5 miles.

PERSONAL-USE FISHERY: Annual personal-use fishery at mouth.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: A skiff has been taken to 5 miles.

I 0.0:7.2R KASKANAK CREEK (Kvichak River)

LOCATION: 59°18'06" N. 156°04'24" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000; Dillingham, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 55.5 miles

LENGTH ACCESSIBLE TO SALMON: 55.5 miles

AVERAGE WIDTH: 25' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 815,540 square yards (168.5 acres)

POTENTIAL SPAWNING AREA: Estimated 5%, 40,656 square yards (8.4 acres)

BOTTOM QUALITY:

WATERSHED: 111 square miles. Shallow stream-cut valley through open rolling tundra. Stream course meanders throughout its entire length. Source: numerous lakes and marshes.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 0.0:7.2R KASKANAK CREEK (Kvichak River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT:

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter available at mouth for most any sized vessel.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to brown water. Creek negotiable by skiff for several miles.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Kaskanak Indian village located at mouth.

I 32.2 LOWER TALARIK CREEK - MAIN STEM (Iliamna Lake)

LOCATION: 59°32'36" N. 155°32'06" W.

PREVIOUS NAMES OR NUMBERS: G4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 0.3 mile to forks

LENGTH ACCESSIBLE TO SALMON: 0.3 mile

AVERAGE WIDTH: 90' RANGE: 70'-120'

AVERAGE DEPTH: 18" RANGE: 12"-48"

TOTAL ACCESSIBLE SPAWNING AREA: 15,972 square yards (3.3 acres)

POTENTIAL SPAWNING AREA: 50%, 7,744 square yards (1.6 acres)

BOTTOM QUALITY: Good gravel from forks to 200 yards below forks, bottom stable.

WATERSHED: 50 square miles for system. Shallow stream-cut valley through open rolling hills, dense willow brush along stream. Two lakes at mouth.

GRADIENT:

WATER VELOCITY: 1.5 fps

FLOW: 108 cfs (Aug. 20, 1962). Measured just below forks, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (Aug. 17, 1961)

WATER TEMPERATURE: 17.0° C. (Aug. 17, 1961)

POOLS AND RIFFLES:

I 32.2 LOWER TALARIK CREEK - MAIN STEM (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 5-9% (1960)

ESCAPEMENT RANGE: 250-306,000

TIME OF OCCUPANCY: July 20-Oct. 10

PEAK OF SPAWNING: Aug. 15-Sept. 10

DISTRIBUTION OF SPAWNERS: Almost all spawning from forks to 200 yards below forks.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. Ground survey best made from skiff.

PERSONAL-USE FISHERY: Natives at times set gill nets in outlet slough prior to freezeup.

FISH SPECIES: Grayling, rainbow, Dolly Varden, northern pike, whitefish, coho.

WILDLIFE SPECIES: Brown bear, caribou, seagulls, ptarmigan, mallards, mergansers.

REMARKS: Main stem considered to be from forks to second lake, although mouth is nearly a mile from forks. A fishing camp was under construction at mouth in 1962.

I 32.2 LOWER TALARIK CREEK - MAIN STEM (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
							Note: Prior to 1961 estimates of both forks and main stem were in most cases combined.
1921	Mid-July	G		Few	0		Good numbers off mouth
1947	9/14	A	all			5,000	60% dead
	9/14	G					Measured ♂ 35, ♀ 70
1948	9/8	G	all				Measured ♂ 118, ♀ 83; scales ♂ 30
1951	9/14	A	0.5				No fish
1952	9/9	G	all				Large numbers fish present. Beach spawning seen in chain of lakes heading creek. Measured ♂ 102, ♀ 100; scales ♂ 67
1953	9/3	A	all				Few fish present
1954	9/5	A	all				Few fish present
1956	8/18	A	all	25,000	7,000		
	9/6	A	all	3,000	15,000		
	9/15	G	2.0				Measured ♂ 43, ♀ 34
1957	8/20	A	all	9,500	0		
1958	9/4	A	all	250	0		Most beach spawning in first large lake on west fork.
1960	9/9	G	all	306,000	Few		
	9/28	A	all	103,000			Thousands dead
	10/5	A	all	3,500	25,000		

I 32.2 LOWER TALARIK CREEK - MAIN STEM (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/20	G 0.3			Few	
1962 8/8	A 0.3	700	0		7,000 off mouth
9/3	A 0.3	3,100	1,033		

I 32.2 LOWER TALARIK CREEK - RIGHT FORK (Iliamna Lake)

LOCATION: 59°32'36" N. 155°32'06" W.

PREVIOUS NAMES OR NUMBERS: G4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 3.1 miles

LENGTH ACCESSIBLE TO SALMON: 3.1 miles

AVERAGE WIDTH: 42' | RANGE: 30'-60'

AVERAGE DEPTH: 12" | RANGE: 8"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 76,472 square yards (15.8 acres)

POTENTIAL SPAWNING AREA: 100%, 76,472 square yards (15.8 acres)

BOTTOM QUALITY: 24% <1/8", 64% 1/8"-3", 12% 3"-12". Excellent spawning gravel throughout stream, bottom stable.

WATERSHED: Shallow stream-cut valley through open rolling hills. Dense willow brush along stream. Source: several small lakes and surface runoff.

GRADIENT: 49'/mile

WATER VELOCITY: 1.5 fps

FLOW: 50 cfs (Aug. 20 1961). Measured at source lake outlet, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (Aug. 17, 1962)

WATER TEMPERATURE: 17.0° C. (Aug. 17, 1962)

POOLS AND RIFFLES:

I 32.2 LOWER TALARIK CREEK - RIGHT FORK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: See Lower Talarik Creek-main stem.

ESCAPEMENT RANGE: See Lower Talarik Creek - main stem.

TIME OF OCCUPANCY: July 20-Oct. 10

PEAK OF SPAWNING: Aug. 15-Sept. 10

DISTRIBUTION OF SPAWNERS: Spawning occurs throughout stream. Spawning also in source lake and small interconnecting stream.

GENERAL INFORMATION

SHELTER: See Lower Talarik Creek - main stem.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. High ground west of stream provides easy access to upstream areas.

PERSONAL-USE FISHERY: See Lower Talarik Creek - main stem.

FISH SPECIES: See Lower Talarik Creek - main stem.

WILDLIFE SPECIES:

REMARKS:

I 32.2 LOWER TALARIK CREEK - RIGHT FORK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1959 8/29	G 0.8	1,700	700		Half of dead bear kills. Count includes that from left fork
1961 8/14	A 3.1	12,000	0		
8/20	G 3.1	7,500	2,000		
9/13	A 3.1	0	Few		Scattered dead in lower 2 miles
1962 8/11	A 3.1	2,800	0		
8/27	G 1.0				Measured ♂ 379, ♀ 400; scales ♂ 100, ♀ 100; otoliths ♂ 50, ♀ 50
9/3	A 3.1	1,300	2,500		

I 32.2 LOWER TAIARIK CREEK - LEFT FORK (Iliamna Lake)

LOCATION: 52°32'36" N. 155°32'06" W.

PREVIOUS NAMES OR NUMBERS: G4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.6 miles

LENGTH ACCESSIBLE TO SALMON: 4.6 miles

AVERAGE WIDTH: 52' RANGE: 30'-90'

AVERAGE DEPTH: 12" RANGE: 8"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 140,360 square yards (29.0 acres)

POTENTIAL SPAWNING AREA: 80%, 112,288 square yards (23.2 acres)

BOTTOM QUALITY: 22% <1/8", 74% 1/8"-3", 4% 3"-12". Excellent spawning gravel in upper half of stream, lower half mainly silt. Bottom fairly stable.

WATERSHED: Shallow stream-cut valley through open rolling hills, dense willow brush along stream. Lower 2 miles of stream meanders through marshy area. Source: several small lakes and surface runoff.

GRADIENT: 33'/mile

WATER VELOCITY: 1.5 fps

FLOW: 62 cfs (Aug. 21, 1961). Measured 2 miles from forks, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (Aug. 17, 1962)

WATER TEMPERATURE: 17.0° C. (Aug. 17, 1962)

POOLS AND RIFFLES:

I 32.2 LOWER TALARIK CREEK - LEFT FORK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: See Lower Talarik Creek - main stem.

ESCAPEMENT RANGE: See Lower Talarik Creek - main stem.

TIME OF OCCUPANCY: July 20-Oct. 10

PEAK OF SPAWNING: Aug. 15-Sept. 10

DISTRIBUTION OF SPAWNERS: Virtually all spawning occurs in upper 2.6 miles, some spawning in lower 2 miles in suitable gravel patches.

GENERAL INFORMATION

SHELTER: See Lower Talarik Creek - main stem.

SURVEY ROUTES AND METHODS: Aerial visibility good. High ground on either side of stream offers easy access to upstream areas.

PERSONAL-USE FISHERY: See Lower Talarik Creek - main stem.

FISH SPECIES: See Lower Talarik Creek - main stem.

WILDLIFE SPECIES:

REMARKS:

I 32.2 LOWER TALARIK CREEK - LEFT FORK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1959 8/29	G 0.3				Count combined with count from right fork
1961 8/14	A 4.6	15,000	0		
8/21	G 4.0	2,340	1,400		
1962 8/11	A 4.6	2,100	0		
9/3	A 4.6	1,100	200		

I 39.2 MIDDLE TALARIK CREEK (Iliamna Lake)

LOCATION: 59°37'36" N. 155°32'06" W.

PREVIOUS NAMES OR NUMBERS: G3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.7 miles

LENGTH ACCESSIBLE TO SALMON: 4.7 miles

AVERAGE WIDTH: 14' RANGE: 10'-17'

AVERAGE DEPTH: 12" RANGE: 10"-20"

TOTAL ACCESSIBLE SPAWNING AREA: 38,720 square yards (8.0 acres)

POTENTIAL SPAWNING AREA: 55%, 21,296 square yards (4.4 acres)

BOTTOM QUALITY: 20% <1/8", 40% 1/8"-3", 37% 3"-12", 3% >12". Good spawning gravel in middle 3 miles. Fair gravel near mouth and below outlet of source lake. Bottom stable.

WATERSHED: 9 square miles. Shallow stream-cut valley in area of open hills and tundra lakes. Steep bluffs along shore line on both sides of creek mouth. Source: springs, surface runoff, and a few small lakes.

GRADIENT: 38'/mile

WATER VELOCITY: 1.5 fps

FLOW: 20 cfs (Aug. 1, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 19.0° C. (Aug. 1, 1962)

WATER TEMPERATURE: 18.0° C. (Aug. 1, 1962)

POOLS AND RIFFLES:

I 39.2 MIDDLE TALARIK CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 1-4%

ESCAPEMENT RANGE: 0-54,000

TIME OF OCCUPANCY: Aug. 1-Sept. 10

PEAK OF SPAWNING: Aug. 15-31

DISTRIBUTION OF SPAWNERS: Spawning occurs throughout stream with heaviest spawning in middle 3 miles. Possible beach spawning observed off mouth in 1962.

GENERAL INFORMATION

SHELTER: A skiff can be pulled into small outlet, depending on status of bar at mouth. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. Creek easily waded. East side of stream offers easy access to upstream areas.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Grayling, Dolly Varden.

WILDLIFE SPECIES: Brown bear, moose, caribou, seagulls, ptarmigan.

REMARKS:

I 39.2 MIDDLE TALARIK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1947	9/5	A	4.7			Few	75% dead, fresh fish off mouth
	9/5	G					Measured ♂ 27, ♀ 78
1948	9/8	A	4.7			Few	Mostly dead
	9/8	G					Measured ♂ 51, ♀ 30; scales ♂ 101
1950	9/6	A	4.7			Few	
1952	9/8	G	2.0	Few	Few		A few fish above 1 mile. Measured ♂ 40, ♀ 102; scales ♂ 100
1953	9/3	A	2.5				40 schooled at outlet
1954	9/5	A	4.7	0	Few		
1956	8/18	A	3.0	2,000	Few		
	9/6	A	3.0	500	2,000		
1957	8/20	A	4.7				No fish
1958	9/4	A	4.7				No fish
1960	8/28	A	3.0	27,000	27,000		
	9/5	A	4.7	3,000	4,500		
1961	8/14	A	4.7	700	0		Well distributed in lower stream
	9/13	A	0.2	0	0		
1962	8/11	A	4.7	950	50		1,600 fish off mouth, may be spawning
	9/3	A	4.7	44	12		

I 46.2 UPPER TALARIK CREEK (Iliamna Lake)

LOCATION: 59°38'48" N. 155°09'54" W.

PREVIOUS NAMES OR NUMBERS: G2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 30.0 miles

LENGTH ACCESSIBLE TO SALMON: 30.0 miles

AVERAGE WIDTH: 38' RANGE: 35'-42'

AVERAGE DEPTH: 18" RANGE: 12"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 669,856 square yards (138.4 acres)

POTENTIAL SPAWNING AREA: 45%, 301,532 square yards (62.3 acres)

BOTTOM QUALITY: 12% <1/8", 77% 1/8"-3", 11% 3"-12". Good gravel in lower 8 miles interspersed with some rubble. Not well known above 8 miles, reported to have good gravel to headwaters. Bottom stable.

WATERSHED: 132 square miles. Lower 5 miles a shallow stream-cut valley, upper 25 miles a glacial valley. Surrounding hills forested with spruce, dense willow brush along stream. Source: surface runoff and several small lakes at headwaters.

GRADIENT: 33'/mile

WATER VELOCITY: 2.0 fps

FLOW: 60 cfs (July 29, 1962). Measured 8 miles from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (July 29, 1962)

WATER TEMPERATURE: 17.0° C. (July 29, 1962)

POOLS AND RIFFLES:

I 46.2 UPPER TALARIK CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 0-10,000

TIME OF OCCUPANCY: July 20-Sept. 10

PEAK OF SPAWNING: Aug. 10-25

DISTRIBUTION OF SPAWNERS: Most spawning in lower 5 miles where several side channels are also utilized.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. Ridge east of creek best for upstream travel. Can be waded during normal water levels.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, coho.

WILDLIFE SPECIES: Brown bear, moose, caribou, bald eagles, seagulls.

REMARKS: There is a trapper's cabin 5 miles from mouth on east side of creek.

I 46.2 UPPER TALARIK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1921 July	G	Few	0		
1922	G			10,000	Not considered important as a spawning stream
1947 9/4	G 2.0			10,000	70-80% dead. Measured ♂ 41, ♀ 64
1950 9/6	A			Few	
1951 9/10	A				No fish
1953 9/3	A				No fish
1955 9/6	A 5.0	200	0		
1956 8/18	A 3.0	4,000	2,000		
9/6	A 3.0	Few	2,000		
1957 8/20	A	500	0		
1958 9/4	A 5.0				No fish
1960 8/28	A 30.0	1,000	0		
9/5	A 3.0				No fish
1961 8/7	G 5.5	1,400	200		Not well distributed
9/13	A 0.2				No fish
1962 7/29	G 8.0	3,680	0		Just entering
8/11	A 14.0	4,100	100		Fish in lower 2 miles, 50 off mouth
8/16	G 1.0				Measured ♂ 85, ♀ 100; scales ♂ 85, ♀ 100; otoliths ♂ 50, ♀ 50
9/3	A 2.0	400	0		High and turbid

I 49.4 PETE ANDREW CREEK (Iliamna Lake)

LOCATION: 59°40'00" N. 155°06'00" W.

PREVIOUS NAMES OR NUMBERS: G1

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.0 miles

LENGTH ACCESSIBLE TO SALMON: 4.0 miles

AVERAGE WIDTH: 36' RANGE: 30'-60'

AVERAGE DEPTH: 8" RANGE: 6"-10"

TOTAL ACCESSIBLE SPAWNING AREA: 84,700 square yards (17.5 acres)

POTENTIAL SPAWNING AREA: 51%, 43,076 square yards (8.9 acres)

BOTTOM QUALITY: 1% <1/8", 30% 1/8"-3", 68% 3"-12", <1% >12". Fair spawning gravel throughout except for 0.5 mile stretch of meadow area 2.5 miles from mouth. Same rubble in lower 2 miles. Bottom stable.

WATERSHED: 10 square miles. A shallow stream-cut valley through open tundra, willow along stream. A spring-fed pond empties into west end of outlet slough. Source: a small lake.

GRADIENT: 27'/mile

WATER VELOCITY: 1.0 fps

FLOW: 17 cfs (June 30, 1962). Measured 1.5 miles from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 18.0° C. (June 30, 1962)

WATER TEMPERATURE: 12.0° C. (June 30, 1962)

POOLS AND RIFFLES:

I 49.4 PETE ANDREW CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 600-16,000

TIME OF OCCUPANCY: July 20-Sept. 1

PEAK OF SPAWNING: Aug. 10-25

DISTRIBUTION OF SPAWNERS: Spawning throughout with heaviest spawning in lower 2 miles and upper 1.5 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. High ground on either side of stream offers easy access to upstream area.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Grayling, rainbow, cottids.

WILDLIFE SPECIES: Brown bear, moose, seagulls, ptarmigan.

REMARKS:

I 49.4 PETE ANDREW CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1960 8/11	G 4.0	15,100	1,500		
9/5	A 1.0	250	50		
1961 8/14	A 4.0	700	0		Schooled
9/13	A 0.2				No fish
1962 8/11	A 4.0	600	0		Fish in lower mile
9/5	A 0.2	50	0		Spawning off mouth

I 51.0 CAR CREEK (Iliamna Lake)

LOCATION: 59°39'48" N. 155°03'42" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 13.0 miles

LENGTH ACCESSIBLE TO SALMON: 13.0 miles

AVERAGE WIDTH: 20' RANGE: 15'-35'

AVERAGE DEPTH: 18" RANGE: 12"-48"

TOTAL ACCESSIBLE SPAWNING AREA: 152,944 square yards (31.6 acres)

POTENTIAL SPAWNING AREA: 25%, 38,236 square yards (7.9 acres)

BOTTOM QUALITY: 55% <1/8", 43% 1/8"-3", 2% 3"-12". Fair gravel from 2 to 4 miles interspersed with rubble. Lower 2 miles mostly silt. Not well known above 4 miles. Bottom apparently stable.

WATERSHED: 21 square miles. A shallow stream-cut valley through open tundra. Source: several small lakes and surface runoff.

GRADIENT: 16'/mile

WATER VELOCITY: 2.0 fps

FLOW: 32 cfs (Aug. 15, 1962). Measured 1 mile from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 18.0° C. (Aug. 15, 1962)

WATER TEMPERATURE: 12.5° C. (Aug. 15, 1962)

POOLS AND RIFFLES:

I 51.0 CAR CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 490 in 1962

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Uncertain, fish known to spawn in upper 2 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter in outlet slough for small boats. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. Foot survey routes undetermined.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 51.0 CAR CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1962 8/11	A 13.0	490	0		Fish in upper two miles, 50 off mouth
8/15	G 3.4	200	0		Fish in outlet slough

I 64.8 LITTLE ROADHOUSE CREEK (Iliamna Lake)

LOCATION: 59°45'06" N. 154°49'36" W.

PREVIOUS NAMES OR NUMBERS: F10

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 6.5 miles

LENGTH ACCESSIBLE TO SALMON: 6.5 miles

AVERAGE WIDTH: 15' RANGE: 10'-30'

AVERAGE DEPTH: 8" RANGE: 6"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 57,112 square yards (11.8 acres)

POTENTIAL SPAWNING AREA: 47%, 26,620 square yards (5.5 acres)

BOTTOM QUALITY: 24% <1/8", 75% 1/8"-3", 1% 3"-12". Fair gravel to 4 miles, silt and hardpan beyond 4 miles. Bottom fairly stable.

WATERSHED: 13 square miles. A shallow stream-cut valley across a flat, sparsly forested area, thick willow brush along stream course. Source: a small lake.

GRADIENT: 24'/mile

WATER VELOCITY: 2.0 fps

FLOW: 15 cfs (June 22, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 15.0° C. (June 22, 1962)

WATER TEMPERATURE: 10.0° C. (June 22, 1962)

POOLS AND RIFFLES:

I 64.8 LITTLE ROADHOUSE CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 0-200

TIME OF OCCUPANCY: Aug. 5-Sept. 20

PEAK OF SPAWNING: Aug. 20-Sept. 10

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Shelter for any size boat available at settlement of Iliamna.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to overhanging brush. Passage along stream difficult.

PERSONAL-USE FISHERY: Annual personal-use fishery of varying intensity.

FISH SPECIES: Dolly Varden, grayling, rainbow, coho.

WILDLIFE SPECIES: Moose, seagulls.

REMARKS: Settlement of Iliamna located immediately east of creek mouth.

I 64.8 LITTLE ROADHOUSE CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1931 9/3	G				Several hundred in upper ponds
1959 8/21	G 0.2	31	39		
1962 8/11	A 2.0	200	0		

I 67.4 HUDSON'S PONDS (Iliamna Lake)

LOCATION: 59°45'36" N. 154°47'08" W.

PREVIOUS NAMES OR NUMBERS: F9 McCallick Creek ponds

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1 mile

LENGTH ACCESSIBLE TO SALMON: 1 mile

AVERAGE WIDTH: Creek 2', 1st pond 27' wide and 36' long, 2d pond 47' wide and 165' long RANGE: 1'-3' creek

AVERAGE DEPTH: 12" in ponds, 6" in creek RANGE: 8"-16" in ponds, 4"-12" in creek

TOTAL ACCESSIBLE SPAWNING AREA: 968 square yards (0.2 acre)

POTENTIAL SPAWNING AREA: 100%, 968 square yards (0.2 acre)

BOTTOM QUALITY: 10% <1/8", 90% 1/8"-3". Excellent gravel in ponds. Creek is mostly sand. Bottom in ponds stable.

WATERSHED: 1 square mile. Stream flows through shallow stream-cut valley, sparsely forested with spruce, ponds surrounded by willow and alder. Source: springs.

GRADIENT:

WATER VELOCITY: 1.0 fps in creek

FLOW: 1.5 cfs (Aug. 17, 1961). Measured at outlet of pond, normal summer flow. RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE: 4.0° C. (Aug. 17, 1961)

POOLS AND RIFFLES:

I 67.4 HUDSON'S PONDS (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 30-4,500

TIME OF OCCUPANCY: Aug. 15-Oct. 15

PEAK OF SPAWNING: Sept. 10-30

DISTRIBUTION OF SPAWNERS: Virtually all spawning occurs in ponds.

GENERAL INFORMATION

SHELTER: Shelter for any size boat available at settlement of Iliamna.

SURVEY ROUTES AND METHODS: Aerial visibility good. Ponds most easily reached by hiking 1 mile northeast from FAA range station.

PERSONAL-USE FISHERY: A heavy annual personal-use fishery in some years.

FISH SPECIES:

WILDLIFE SPECIES: Brown bear, ptarmigan, spruce hens, seagulls.

REMARKS:

I 67.4 HUDSON'S PONDS (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1955 10/2	A pond	30	0		
1956 9/27	A pond	2,000	1,000		
1957 9/19	A pond	300	0		
9/24	G pond	384	80		Measured ♂ 47, ♀ 48; scales ♂ 31, ♀ 30
1959 9/6	A pond	75	0		450 off mouth
9/17	G pond	374	0		6,000 off mouth
10/12	A pond	50	0		
1960 8/28	A pond	4,500	0		
9/12	A pond				Jammed with fish, 1,500 off mouth
9/16	A pond	4,000	Few		1,000 off mouth
9/29	A pond	1,500	Many		
9/30	G pond	1,200	Many		Dead mostly bear kills
1961 8/17	G pond	300	Few		500 off mouth
9/2	G pond	350	72		Measurements ♀ 10; scales ♀ 8
9/13	G pond	1,000	Few		
1962 9/3	A pond	65	0		100 off mouth
9/22	G pond				Measured ♂ 4, ♀ 7; scales ♂ 4, ♀ 7; otoliths ♂ 4, ♀ 7

I 80.9 NW. EAGLE BAY CREEK (Iliamna Lake)

LOCATION: 59°64'12" N. 154°40'30" W.

PREVIOUS NAMES OR NUMBERS: F8

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 7.0 miles

LENGTH ACCESSIBLE TO SALMON: 7.0 miles

AVERAGE WIDTH: 12' | RANGE: 10'-15'

AVERAGE DEPTH: 24" | RANGE: 18"-42"

TOTAL ACCESSIBLE SPAWNING AREA: 49,368 square yards (10.2 acres)

POTENTIAL SPAWNING AREA: 13%, 6,292 square yards (1.3 acres)

BOTTOM QUALITY: 64% <1/8", 25% 1/8"-3", 8% 3"-12", 3% >12". Poor spawning facilities in lower 3.4 miles due to silt bottom, facilities in upper portion fair. Bottom fairly stable.

WATERSHED: 8 square miles. A marshy lake 100 by 400 yards at mouth. Above this stream meanders through open stream-cut valley for 3 miles. Surrounding hills sparsely forested with spruce. Source: a small lake and surface runoff.

GRADIENT: 15'/mile

WATER VELOCITY: 1.5 fps

FLOW: 10 cfs (Aug. 14, 1962). Measured RANGE:
4 miles from mouth, normal summer flow.

AIR TEMPERATURE: 18.0° C. (Aug. 14, 1962)

WATER TEMPERATURE: 16.0° C. (Aug. 14, 1962)

POOLS AND RIFFLES:

I 80.9 NW. EAGLE BAY CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 0-5,000

TIME OF OCCUPANCY: Aug. 1-Sept. 30

PEAK OF SPAWNING: Aug. 20-Sept. 10

DISTRIBUTION OF SPAWNERS: All spawning apparently in upper 2 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter available for any boat in and near creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to brown-colored water. Lower 3 miles best negotiated by skiff.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, grayling, rainbow.

WILDLIFE SPECIES: Seal, fox, seagulls, mallards.

REMARKS:

I 80.9 NW. EAGLE BAY CREEK (Iliamna lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 9/2	A 1.5				Run 2,000-5,000 fish
1949 9/8	A 3.0				No fish
1953 9/6	A				No fish
1954 9/6	A				No fish
1957 9/26	G 2.0	Few	Few		
1958 8/1	G 7.0	102	0		
9/26	A				No fish
1962 8/11	A 4.0	500	0		Fish in upper 2 miles

I 82.0 NE. EAGLE BAY CREEK (Iliamna lake)

LOCATION: 59°46'00" N. 154°39'00" W.

PREVIOUS NAMES OR NUMBERS: F7

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 10.3 miles

LENGTH ACCESSIBLE TO SALMON: 10.3 miles

AVERAGE WIDTH: 25' RANGE: 20'-30'

AVERAGE DEPTH: 12" RANGE: 8"-18"

TOTAL ACCESSIBLE SPAWNING AREA: 151,492 square yards (31.3 acres)

POTENTIAL SPAWNING AREA: 54%, 81,312 square yards (16.8 acres)

BOTTOM QUALITY: 17% <1/8", 51% 1/8"-3", 30% 3"-12", 2% >12". Good gravel to 4 miles, beyond 4 miles stream becomes precipitous and bottom coarse. Bottom fairly stable.

WATERSHED: 19 square miles. A shallow stream-cut valley densely overgrown with willow brush, thin spruce and birch forest on high ground. Source: mainly surface runoff, reported to have springs.

GRADIENT: 237'/mile

WATER VELOCITY: 2.0 fps

FLOW: 34 cfs (June 28, 1962). Measured 400 yds. above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 10.0° C. (June 28, 1962)

WATER TEMPERATURE: 6.8° C. (June 28, 1962)

POOLS AND RIFFLES:

I 82.0 NE. EAGLE BAY CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 0-1,650

TIME OF OCCUPANCY: Aug. 1-Oct. 1

PEAK OF SPAWNING: Aug. 10-Sept. 1

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat available 0.5 mile northwest of stream mouth.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to overhanging brush. A good game trail follows ridge southwest of creek for about 2 miles to first fork. Creek easily followed at normal water levels. Ground survey impossible during flood.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES: Moose, brown bear, seagulls.

REMARKS: Ruins of a cabin 0.5 mile northeast of creek mouth.

I 82.0 NE. EAGLE BAY CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 9/5	A 2.0				Most important stream in Eagle Bay
1949 9/8	A 0.2				No fish
1953 9/6	A				No fish
1957 9/26	G 0.5	Few	Few		
1958 8/28	A 0.2	500	0		
9/26	A				No fish
1959 9/6	G 2.0			4	210 off mouth
1960 9/23	G 2.5				A few thousand live and dead
1961 8/14	A 1.0				100 off mouth
9/8	G 1.5	0	32		
1962 8/11	A 3.0	1,600	50		
8/13	G 1.0				Measured ♂ 40, ♀ 40; scales ♂ 40, ♀ 40
9/27	A 10.3	200	10		In ponds

I 92.6 YOUNG'S CREEK (Iliamna Lake)

LOCATION: 59°47'42" N. 154°27'00" W.

PREVIOUS NAMES OR NUMBERS: F6

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 12.5 miles

LENGTH ACCESSIBLE TO SALMON: 12.5 miles

AVERAGE WIDTH: 40' | RANGE: 25'-60'

AVERAGE DEPTH: 12" | RANGE: 8"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 293,304 square yards (60.6 acres)

POTENTIAL SPAWNING AREA: 40%, 117,128 square yards (24.2 acres)

BOTTOM QUALITY: 2% <1/8", 75% 1/8"-3", 21% 3"-12", 2% >12". Good gravel from 1.2 to 4 miles, bottom coarse beyond 4 miles. Left fork nonspawnable due to rubble bottom. Bottom stable above 1.2 miles.

WATERSHED: 35 square miles. A glacial valley. Lower mile of stream meanders through 9 mile long marshy lake. Creek forks 4 miles above mouth. Dense willow brush along stream. Thin spruce forest on high ground. Source: mainly surface runoff.

GRADIENT: 52'/mile

WATER VELOCITY: 4.0 fps

FLOW: 76 cfs (Aug. 30, 1961). Measured 1.5 miles from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 13.0° C. (Aug. 30, 1961)

WATER TEMPERATURE: 9.0° C. (Aug. 30, 1961)

POOLS AND RIFFLES:

I 92.6 YOUNG'S CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1959)

ESCAPEMENT RANGE: 0-4,500

TIME OF OCCUPANCY: Aug. 10-Sept. 15

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: Uncertain, a 1-mile stretch 1.2 miles from mouth well utilized.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Wadable during normal water levels. High ground west of stream best for upstream travel.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, whitefish.

WILDLIFE SPECIES: Brown bear, moose, seagulls, mergansers.

REMARKS: Remains of a cabin east of creek mouth.

I 92.6 YOUNG'S CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1927 8/17	G				A fair run
1928 8/13	G 0.5				Good numbers ready to ascend
1929 8/16	G				Almost total failure
1947 9/5	A				Some schooled in slough
1948 9/8	A 0.2				No fish
1949 9/6	A				No fish
1958 8/28	A				No fish
1959 9/6	A	4,500	0		Hard to see
9/9	G 1.5	12	Few		All in outlet slough
1961 8/14	A 3.0	200	0		Well distributed in portion surveyed
8/30	G 4.0	516	303		Fish in 1 mile portion of stream
1962 9/3	A 5.0	80	0		Spawning over

I 99.2 CHEKOK CREEK (Iliamna Lake)

LOCATION: 59°47'24" N. 154°23'00" W.

PREVIOUS NAMES OR NUMBERS: F5

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.0 miles

LENGTH ACCESSIBLE TO SALMON: 1.25 miles

AVERAGE WIDTH: 15' RANGE: 9'-20'

AVERAGE DEPTH: 8" RANGE: 6"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 11,132 square yards (2.3 acres)

POTENTIAL SPAWNING AREA: 10%, 1,132 square yards (0.23 acre)

BOTTOM QUALITY: 57% <1/8", 43% 1/8"-3". Poor spawning facilities due to silt. Bottom unstable. Spring ponds good when accessible.

WATERSHED: 6 square miles. A shallow stream-cut valley between Roadhouse and Knutson Mountains. Creek occupies same watershed as Tomkok and Canyon Creeks. Willow, alder, and birch along stream, some cottonwood and spruce. Source: spring ponds, several small lakes at head. Blocked by beaver dam 1.3 miles from mouth.

GRADIENT: 30'/mile

WATER VELOCITY: 1.0 fps

FLOW: 10 cfs (Aug. 30, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 17.0° C. (Aug. 30, 1962)

WATER TEMPERATURE: 7.0° C. (Aug. 30, 1962)

POOLS AND RIFFLES:

I 99.2 CHEKOK CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1959)

ESCAPEMENT RANGE: 0-5,600

TIME OF OCCUPANCY: Aug. 1-Sept. 30

PEAK OF SPAWNING: Aug. 15-Sept. 25

DISTRIBUTION OF SPAWNERS: Spawning in graveled sections of creek and in spring ponds when accessible.

GENERAL INFORMATION

SHELTER: Excellent shelter in outlet slough provided lake level is high enough to allow passage over sand flat off mouth. Shelter also available 400 yards southwest of creek mouth next to rock bluff.

SURVEY ROUTES AND METHODS: Aerial visibility fair. A trail on west side of creek leads to first pond. Above this trail follows creek to remaining ponds. Creek easily waded after first mile. Lower mile best negotiated by skiff.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, Dolly Varden.

WILDLIFE SPECIES: Brown bear, moose, beaver, seagulls, mergansers.

REMARKS: A village 1.5 miles above mouth abandoned in the early 1900's. Chekok and Tomkok Creeks have at times been directly connected. Creek misnamed on U.S.G.S. Map Iliamna, Alaska, 1:250,000. See Tomkok Creek for further details.

I 99.2 CHEKOK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1921		G					8 ponds, 200-1,000 fish each
1922		G		5,600			Fish in first pond, 40' x 350'
1923		G		500	0		In first pond
1924		G					No fish
1925		G				Few	Fish small, high percentage of males
1926		G				5,000	Beaver dam 0.7 mile up
1927	8/20	G		350	0		Beaver dam 0.5 mile up
1928	8/14	G	0.3				50,000 off mouth. Some ascending, no spawning
1929	8/16	G					No fish
1930	8/15	G	3.0	12	0		10 in ponds, 2 in stream
1947	9/5	A					2,500-4,500 live and dead, 90% live
	9/15	A					90% dead
1949	9/8	A	0.3				No fish
1956	8/17	A		3,000	0		Poor visibility and counts
1958	8/14	G	0.3	304	0		
	8/28	A		1,200	0		Fish in creek
	9/3	G	0.5	461	0		145 in section surveyed 8/14
	9/19	G	1.0	Few	Few		
	9/26	A					None in stream, many in ponds

I 99.2 CHEKOK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1959	8/10	G 1.0	3,303	0		Heavy spawning
	8/16	G 2.0	Many	Many		No fish in ponds
	9/10	G 2.5	953	0		Branch from east below first pond dry
1960	8/20	G 1.5	822	11		
	8/28	A 5.0	Few	0		
1961	8/14	A 2.0	200	0		Schooled below beaver dam
	8/30	G 1.5	235	6		Stream blocked by beaver dam 1.3 miles up
1962	8/11	A 2.0	2,700	0		Estimate includes Tomkok Creek, 2,000 off mouth
	9/3	A 5.0	160	Few		None in ponds. Beaver dam

I 102.8 TOMKOK CREEK (Iliamna Lake)

LOCATION: 59°47'42" N. 154°21'48" W.

PREVIOUS NAMES OR NUMBERS: F4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 16.5 miles

LENGTH ACCESSIBLE TO SALMON: 16.5 miles

AVERAGE WIDTH: 20' RANGE: 15'-35'

AVERAGE DEPTH: 12" RANGE: 10"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 193,600 square yards (40.0 acres)

POTENTIAL SPAWNING AREA: 35%, 67,760 square yards (14.0 acres)

BOTTOM QUALITY: 33% <1/8", 28% 1/8"-3", 28% 3"-12", 11% >12". Lower 2 miles good spawning gravel interspersed with rocky areas, upper portion poor due to rubble and boulders. Bottom fairly stable.

WATERSHED: 74 square miles. Upper part a glacial valley, lower 4 miles a broad flat heavily forested with spruce, cottonwood, and birch. Tomkok and Cayon Creeks directly connected 3 miles above mouth of Tomkok Creek. Source: a small lake, some springs in lower 2 miles.

GRADIENT: 55'/mile

WATER VELOCITY: 2.0 fps

FLOW: 40 cfs (Sept. 7, 1962). Measured 300 yds above confluence with Canyon Creek, normal summer flow. RANGE:

AIR TEMPERATURE: 18.0° C. (Sept. 7, 1962)

WATER TEMPERATURE: 8.8° C. (Sept. 7, 1962)

POOLS AND RIFFLES:

I 102.8 TOMKOK CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 0-5,000

TIME OF OCCUPANCY: Aug. 5-Sept. 20

PEAK OF SPAWNING: Aug. 15-Sept. 10

DISTRIBUTION OF SPAWNERS: Most spawning in lower 3 miles and in several side channels in this section.

GENERAL INFORMATION

SHELTER: A small boat can be taken into creek mouth. Bay at creek mouth shallow and strewn with boulders.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to overhanging brush. Best foot survey route is along banks and over streambed. Easily waded during normal water levels.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES: Seagulls.

REMARKS: Because of a severe flood in 1927, a major watershed change occurred involving Tomkok and Chekok Creeks. As a result most of the flow from Chekok Creek was diverted to Tomkok Creek. This breakthrough resulted in much confusion of stream names and a subsequent error in the geological survey of the region. The creek named Chekok on U.S.G.S Map Iliamna, Alaska, (1:250,000) should be Tomkok Creek. Chekok Creek is unnamed and flows into the extreme eastern end of Chekok Bay.

In 1959, resulting from another flood, a watershed change involving Canyon Creek and Tomkok Creek occurred. Consequently most of the Canyon Creek flow was diverted to Tomkok Creek. In 1962, the flow at the mouth of Canyon Creek was from Wolf Creek ponds.

I 102.8 TOMKOK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1927 8/17	G				Well supplied
1928 8/13	G 3.0	5,000	0		20,000 off mouth
1929 8/16	G				Northside streams almost total failure
1931 9/1	G				Good escapement
1947 9/5	A				5,000 off mouth
1949 9/8	A 0.2				No fish
1962 9/3	A 7.0	1,600	Few		Drains all of old Canyon Creek and Tomkok Creek flow in Canyon Creek from Wolf Creek ponds. 1,500 off mouth
9/6	G 3.0				Measured ♂ 51, ♀ 102; scales ♂ 51, ♀ 102. Samples include those from Canyon Creek.

I 103.8 PRINCE CREEK PONDS (Iliamna Lake)

LOCATION: 59°47'42" N. 154°20'16" W.

PREVIOUS NAMES OR NUMBERS: F3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 0.5 mile

LENGTH ACCESSIBLE TO SALMON: 0.5 mile

AVERAGE WIDTH: 5' below ponds | RANGE:

AVERAGE DEPTH: 24" below ponds | RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 2,904 square yards (0.6 acre) in six ponds

POTENTIAL SPAWNING AREA: 100%, 2,904 square yards (0.6 acre) in six ponds

BOTTOM QUALITY: 40% <1/8", 60% 1/8"-3". Good gravel throughout pond with scattered patches of sand, bottom stable.

WATERSHED: 0.5 square mile. Creek flows through a large swampy area between Canyon and Tomkok Creeks. Area generally open with some cottonwood, spruce, and willow near ponds. Source: springs.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 103.8 PRINCE CREEK PONDS (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: <100-11,000

TIME OF OCCUPANCY: Aug. 10-Oct. 15

PEAK OF SPAWNING: Sept. 15-Oct. 5

DISTRIBUTION OF SPAWNERS: Spawning occurs in all ponds.

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat in several bays 200 yards east of creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility good. A skiff can be taken up creek to ponds. A trail from Hedlund residence leads to ponds. Ponds also reached by hiking southwest from Canyon Creek above confluence with Wolf Creek.

PERSONAL-USE FISHERY: Fish taken late in season some years.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS:

I 103.8 PRINCE CREEK PONDS (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1956 8/17	A 0.5	1,000	0		
9/27	A 0.5	6,000	5,000		
1957 9/16	A 0.5	5,000	0		
1958 8/11	G 0.5	110	0		Some spawning
8/28	A 0.5	250	0		
1959 8/10	G 0.5	Few	0		Red fry 35-40 mm seen in one pond
9/6	A 0.5	1,200	0		
1960 8/28	A 0.5	2,000	0		
1961 8/18	G 0.5	58	0		
9/10	A 0.5	500	Few		

I 105.9 CANYON CREEK (Iliamna Lake)

LOCATION: 59°48'06" N. 154°19'54" W.

PREVIOUS NAMES OR NUMBERS: F2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 18.5 miles

LENGTH ACCESSIBLE TO SALMON: 18.5 miles

AVERAGE WIDTH: 35' RANGE: 20'-50'

AVERAGE DEPTH: 14" RANGE: 10"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 379,940 square yards (78.5 acres)

POTENTIAL SPAWNING AREA: 51%, 193,600 square yards (40.0 acres)

BOTTOM QUALITY: 37% <1/8", 29% 1/8"-3", 27% 3"-12", 7% >12". Lower 2 miles good spawning gravel, above 2 miles bottom becomes coarse. Bottom fairly stable.

WATERSHED: 40 square miles. Upper portion a stream-cut valley, lower 3 miles a broad flat covered with spruce and cottonwood. Frequent channel changes in lower 3 miles. Small falls and rapids common above 4 miles. Source: small lakes and surface runoff.

GRADIENT: 137'/mile

WATER VELOCITY: 2.0 fps

FLOW: 60 cfs (Sept. 7, 1962). Measured near confluence with Tomkok Creek, normal summer flow. RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 105.9 CANYON CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 100-112,000

TIME OF OCCUPANCY: Aug. 1-Oct. 1

PEAK OF SPAWNING: Aug. 15-Sept. 15

DISTRIBUTION OF SPAWNERS: Spawning throughout lower 2 miles and in several old creek channels in this area.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but northwesterly winds.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Creek easily waded above mouth. Often convenient to survey Wolf Creek ponds first, then hike overland to Canyon Creek and survey down stream.

PERSONAL-USE FISHERY: Annual personal-use fishery of varying intensity.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS: A fish camp and residence located at creek mouth. See Tomkok Creek for description of watershed change involving Canyon and Tomkok Creeks.

I 105.9 CANYON CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1925	G	100	0		
1926 8/29	G	2,000	0		
1927 8/17	G				Better than last year
1928 8/14	G 0.2	20,000	0		Steady line of fish ascending stream
1929 8/16	G				No fish
1931 8/28	G 6.0	112,000	0		Most were spawning, 12,000 off mouth
1947 9/5	G				Fish present. Measured ♂ 58
1948 9/8	A				Fairly heavy run. Few dead
1949 9/8	G				Scales ♂ 40
1950 9/5	G				Measured ♂ 8, ♀ 65; scales ♂ 27
1951 9/20	A				Schooled. Few in stream
1952 9/10	G				Good run, few dead. Scales ♂ 50
1953 9/3	A 0.2	1,000	0		
1954 9/6	A				200 off mouth
1956 8/17	A 2.0	27,000	0		21,000 off mouth
1957 8/20	A	9,000	0		

I 105.9 CANYON CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1958 8/10	G 1.5	390	0		
8/28	A 3.0	2,700	0		
9/1	G 1.5	1,920	0		Fresh fish schooled at outlet
9/17	G 1.5	543	Few		Few fish above Wolf Creek, fresh schools in outlet
1959 8/10	G 1.5	1,350	0		6,000 off mouth
9/8	G 0.1				Flooding
1960 8/28	A 18.5				Turbid
9/5	A 18.5	18,000	0		Mostly schooled
9/16	A 5.0	3,000	0		Mostly schooled
9/20	G 2.0	100	50		Measured ♂ 60, ♀ 60; scales ♂ 60, ♀ 60
9/23	A 4.0	4,000	0		Dead not visible, 2,000 off mouth
1961 9/18	G 1.0	800	240		
1962 8/11	A 6.0	5,900	0		2,000 off mouth
9/3	A 3.0	1,900	Few		Only channel is to Wolf Creek ponds, 1,500 off mouth

I 105.9 CANYON SPRINGS (Canyon Creek)

LOCATION: 59°48'06" N. 154°19'54" W.

PREVIOUS NAMES OR NUMBERS: F2a

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 250 yards. A small tributary is 0.5 mile long, each branch of springs is 6' x 300'.

LENGTH ACCESSIBLE TO SALMON: 250 yards

AVERAGE WIDTH: 30' RANGE: 12'-40'

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 2,904 square yards (0.6 acre)

POTENTIAL SPAWNING AREA: 80%, 2,420 square yards (0.5 acre)

BOTTOM QUALITY: Good gravel in each branch and most of pond, lower pond area near Canyon Creek silted. Bottom stable.

WATERSHED: 1 square mile. Tributary to Canyon Creek at mouth. Mouth of springs a slough on north side of Canyon Creek mouth. Spring area open. Source: springs.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 105.9 CANYON SPRINGS (Canyon Creek)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1959)

ESCAPEMENT RANGE: 179-9,000

TIME OF OCCUPANCY: Aug. 1-Oct. 1

PEAK OF SPAWNING: Sept. 1-20

DISTRIBUTION OF SPAWNERS: Spawning throughout with heaviest spawning in the two branches.

GENERAL INFORMATION

SHELTER: See Canyon Creek.

SURVEY ROUTES AND METHODS: Aerial visibility poor. Skiff necessary to survey lower part. Branches easily waded.

PERSONAL-USE FISHERY: See Canyon Creek.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 105.9 CANYON SPRINGS (Canyon Creek)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1931 8/28	G 0.2	9,000	0		
1958 9/1	G 0.2	179	0		
1959 9/8	G 0.2	364	0		

I 105.9:1.0L WOLF CREEK PONDS (Canyon Creek)

LOCATION: 59°48'24" N. 154°20'00" W.

PREVIOUS NAMES OR NUMBERS: F2b

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1 mile

LENGTH ACCESSIBLE TO SALMON: 1 mile

AVERAGE WIDTH: 10' below ponds | RANGE: 6'-14' below ponds

AVERAGE DEPTH: 14" | RANGE: 12"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 4,356 square yards (0.9 acre) in 12 ponds

POTENTIAL SPAWNING AREA: 100%, 4,356 square yards (0.9 acre) in 12 ponds

BOTTOM QUALITY: 100% 1/8"-3". Excellent spawning gravel in all ponds and interconnecting streams. Bottom stable.

WATERSHED: 1 square mile. The 12 ponds are in a flat area east of Canyon Creek. Stream course partly open, dense brush in places. Ponds surrounded by thin spruce forest. Source: springs.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 105.9:1.0L WOLF CREEK PONDS (Canyon Creek)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 0-5,200

TIME OF OCCUPANCY: Aug. 5-Dec. 31

PEAK OF SPAWNING: Aug. 20-Sept. 20

DISTRIBUTION OF SPAWNERS: Spawning throughout ponds and connecting streams.

GENERAL INFORMATION

SHELTER: See Canyon Creek.

SURVEY ROUTES AND METHODS: Aerial visibility good. Pond easily reached by hiking north along beach from Canyon Creek, over hill at end of beach then northwest along game trails to creek.

PERSONAL-USE FISHERY: None reported, see Canyon Creek.

FISH SPECIES:

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS:

I 105.9:1.0L WOLF CREEK PONDS (Canyon Creek)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1949 9/8	A 1.0	150	0		
1953 9/6	A 1.0	25	0		
1954 9/6	A 1.0	0	0		
1959 9/8	G 1.0	400	90		Possible major contributor in Canyon Creek system
1960 8/22	G 1.0	4,200	1,000		
8/28	A 1.0	3,000	Few		
9/5	A 1.0	4,000	0		Mostly schooled
9/16	A 1.0	3,000	Few		
9/20	G 1.0	3,000	1,000		Measured ♂ 28, ♀ 40; scales ♂ 28, ♀ 40
9/23	A 1.0				
1961 8/19	G 1.0	4	0		
9/10	A 1.0	300	Few		
1962 9/3	A 1.0	400	0		
9/20	G 1.0				Measured ♂ 32, ♀50; scales ♂ 32, ♀ 50; otoliths ♂ 28, ♀ 48
9/27	A 1.0				1,000 in creek

I 106.6 MINK CREEK (Iliamna Lake)

LOCATION: 59°48'18" N. 154°18'48" W.

PREVIOUS NAMES OR NUMBERS: F1

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 3.8 miles

LENGTH ACCESSIBLE TO SALMON: 3.8 miles

AVERAGE WIDTH: 12' RANGE: 6'-15'

AVERAGE DEPTH: 12" RANGE: 6"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 26,620 square yards (5.5 acres)

POTENTIAL SPAWNING AREA: 53%, 14,036 square yards (2.9 acres)

BOTTOM QUALITY: 19% <1/8", 29% 1/8"-3", 47% 3"-12", 5% >12". Fair spawning gravel to forks. Poor spawning facilities beyond forks due to coarse bottom. Bottom stable.

WATERSHED: 6 square miles. Heads on north side of Knutson Mountain and flows through a shallow stream-cut valley. Spruce and birch forest and dense willow thickets along stream. Source: mainly surface runoff.

GRADIENT: 263'/mile

WATER VELOCITY: 1.0 fps

FLOW: 10 cfs (July 23, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 22.0° C. (July 23, 1962)

WATER TEMPERATURE: 16.0° C. (July 23, 1962)

POOLS AND RIFFLES:

I 106.6 MINK CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 20-1,100

TIME OF OCCUPANCY: Aug. 10-Sept. 10

PEAK OF SPAWNING: Aug. 25-Sept. 1

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Mouth protected only from northerly and westerly winds. Protection from easterly and southerly winds available at Canyon Creek.

SURVEY ROUTES AND METHODS: Aerial visibility poor. Travel upstream bed not too difficult.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS:

I 106.6 MINK CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947					Of minor importance
1958 8/10	G 0.5	84	0		Schooled
1959 8/10	G 0.1	100	0		
1962 8/11	A 3.8	1,100	0		100 off mouth
9/3	A 1.0	20	0		Spawning over

I 112.7 KNUTSON CREEK (Iliamna Lake)

LOCATION: 59°48'06" N. 154°09'18" W.

PREVIOUS NAMES OR NUMBERS: E5

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 12.5 miles

LENGTH ACCESSIBLE TO SALMON: 12.5 miles

AVERAGE WIDTH: 40' RANGE: 25'-50'

AVERAGE DEPTH: 18" RANGE: 12"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 293,304 square yards (60.6 acres)

POTENTIAL SPAWNING AREA: 30%, 88,088 square yards (18.2 acres)

BOTTOM QUALITY: Streambed composed almost entirely of large boulders except near mouth where some gravel and rubble occur. Bottom unstable.

WATERSHED: 48 square miles. A glacial valley heavily forested with spruce, birch, and cottonwood. Subject to severe flooding. Source: surface runoff.

GRADIENT: 168'/mile

WATER VELOCITY: 2.0 fps

FLOW: 90 cfs (July 23, 1962). Measured at 1 mile, normal summer flow. RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 112.7 KNUTSON CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 0-3,100

TIME OF OCCUPANCY: Aug. 1-Oct. 1

PEAK OF SPAWNING: Aug. 5-Sept. 15

DISTRIBUTION OF SPAWNERS: Nearly all spawning in lower 100 yards. Fish may spawn far upstream in suitable gravel patches.

GENERAL INFORMATION

SHELTER: Excellent shelter in slough which enters southeast corner of Knutson Bay.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Easily surveyed on foot except when flooding.

PERSONAL-USE FISHERY: Fish taken in some years, no regular fishery.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS:

I 112.7 KNUTSON CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1921		G				1,000	Spawning in springs tributary to creek
1925		G				150	Possibilities limited to small spring near mouth
1926		G				2,000	
1927	8/20	G					Better than last year
1929	8/16	G				Few	
1930	Aug.	G				Few	
1931	8/26	G		3,100	0		
1948	9/8	A					Fish in lower mile
1949	9/2	A		0	0		
1950	9/6	G					Measured ♂ 47, ♀ 96; scales ♂ 40
1951	9/20	G					Measured ♂ 102, ♀ 100; scales ♂ 40
1952	9/16	G					Measured ♂ 101, ♀ 106
1953	9/3	G		213	30		
1954	9/6	A					300 off mouth
1956	9/6	A	1.0	3,000	Few		

I 112.7 KNUTSON CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 9/18	A 0.1				1,500 off mouth
1958 8/9	A 0.1	135	0		Nearly all spawning
8/28	A 0.1	600	0		Mostly spawning
1959 9/2	G 0.3			Few	Shows evidence of severe high water
9/28	G 0.1			Few	Considerable change from flood
1962 8/11	A 4.0	300	0		2,000 off mouth
9/3	A 3.0	500	0		1,000 off mouth

I 112.8 KNUTSON PONDS (Iliamna Lake)

LOCATION: 59°47'54" N. 154°09'24" W.

PREVIOUS NAMES OR NUMBERS: E6, Alec's Ponds

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 200 yards

LENGTH ACCESSIBLE TO SALMON: 200 yards

AVERAGE WIDTH: 30' x 90', 60' x 60', 45' x 300' RANGE:

AVERAGE DEPTH: 18" RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 484 square yards (0.1 acre)

POTENTIAL SPAWNING AREA: 100%, 484 square yards (0.1 acre)

BOTTOM QUALITY: 20% <1/8", 80% 1/8"-3". Excellent gravel in all ponds. Bottom stable.

WATERSHED: 0.5 square mile. Ponds occupy a small open area adjacent to Knutson Creek. Ponds drain into slough at southeast corner of Knutson Bay. Source: springs.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 112.8 KNUTSON PONDS (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 150-2,000

TIME OF OCCUPANCY: Aug. 15-Nov. 30

PEAK OF SPAWNING: Sept. 10-Oct. 30

DISTRIBUTION OF SPAWNERS: All spawning in small pond north of other ponds. Spawning also in old creek channel.

GENERAL INFORMATION

SHELTER: Excellent shelter in slough which drains ponds.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Ponds easily reached by trail from Pedro Bay or by following north bank of slough from Knutson Bay. Old channel 50 yards north of slough easily surveyed by walking banks.

PERSONAL-USE FISHERY: Personal-use fishery here at times. Natives often take fish late in season for use as dog food.

FISH SPECIES: Dolly Varden.

WILDLIFE SPECIES:

REMARKS:

I 112.8

KNUTSON PONDS (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1949	9/8	A 0.1				Moderate numbers, fish green
1950	9/8	A 0.1				Fish present
1951	9/20	A 0.1				More than last year
1952	9/12	A 0.1				Good numbers
	9/16	G 0.1				Good numbers
1953	9/3	A 0.1	600	0		One-half of last year's run
	9/6	G 0.1	83	0		
1954	9/6	A 0.1	300	0		
1956	9/6	A 0.1	2,000	0		Estimate includes W. Pedro Creek ponds
1958	8/28	A 0.1	150	0		All spawning in one pond
1959	9/11	G 0.1	148	Few		Dead mostly bear kills
	9/28	G 0.1	140	Few		
1961	8/17	G 0.1	320	0		
1962	9/3	A 0.1	500	0		Turbid
	9/27	A 0.1	1,880			

I 131.9 PEDRO CREEK AND PONDS (Iliamna Lake)

LOCATION: 59°47'00" N. 154°07'12" W.

PREVIOUS NAMES OR NUMBERS: E2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: To east ponds 2.0 miles, to west ponds 1.5 miles

LENGTH ACCESSIBLE TO SALMON: 2.0 and 1.5 miles respectively

AVERAGE WIDTH: 10' at creek mouth RANGE:

AVERAGE DEPTH: 18" at creek mouth and in ponds RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 18,876 square yards (3.9 acres)

POTENTIAL SPAWNING AREA: 100%, 18,876 square yards (3.9 acres)

BOTTOM QUALITY: Good gravel in all ponds, bottom stable.

WATERSHED: 4 square miles. A broad flat between Pedro Bay and Knutson Bay. Dense spruce, cottonwood, and birch forest surround pond area, open marsh along creek. Source: springs.

GRADIENT:

WATER VELOCITY: 0.1-0.5 fps at creek mouth, 1.0 fps between ponds

FLOW: 10 cfs (station, date unknown) RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 131.9 PEDRO CREEK AND PONDS (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 150-120,000

TIME OF OCCUPANCY: Aug. 5-Dec. 1

PEAK OF SPAWNING: Sept. 10-Oct. 30

DISTRIBUTION OF SPAWNERS: Virtually all spawning occurs in ponds, two or three ponds not generally utilized.

GENERAL INFORMATION

SHELTER: Excellent shelter available at Pedro Bay for any vessel. A skiff can be taken into creek.

SURVEY ROUTES AND METHODS: Aerial visibility good. Ponds easily reached by trail from Pedro Bay Village.

PERSONAL-USE FISHERY: A heavy annual personal-use fishery since about 1945.

FISH SPECIES: Dolly Varden.

WILDLIFE SPECIES:

REMARKS: Pedro Bay Post Office and Foss residence located east of creek mouth, Hedlund residence west of creek mouth. Main Pedro Bay Village about 0.5 mile east of creek mouth.

I 131.9 PEDRO CREEK AND PONDS (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1926		G		2,000	0		
1927	8/18	G					Better than last year
1928	8/16	G		30,000	0		Estimated en route to ponds
1929	8/16	G					No fish in lower area
1930	Aug.	G		2,000	0		Fish scattered throughout ponds
1931	8/16	G		120,000	0		Run equal to 1918 and 1922
1957	8/20	A		500	0		Estimate of creek only
1958	8/8	G	1.5	1	0		West ponds only
	8/28	G	1.5	0	0		West ponds only
1959	9/28	G	1.5	150	0		West ponds only. One of largest ponds filled with sand from Knutson Creek flood
1960	8/28	A	2.0	8,000	0		17,000 off mouth
	9/5	A	2.0	2,000	0		Ponds only
	9/8	G	2.0	1,600	1,000		Measured ♂ 60, ♀ 60; scales ♂ 60, ♀ 60
	9/23	A	2.0			13,000	Live and dead
1961	9/13	A	2.0	150	0		
1962	9/21	G	2.0				Measured ♂ 60, ♀ 60; scales ♂ 60, ♀ 60; otoliths ♂ 58, ♀ 52
	9/27	A	2.0	1,500	500		More ponds in use this year

I 132.9 RUSSIAN CREEK (Iliamna Lake)

LOCATION: 59°46'30" N. 154°05'00" W.

PREVIOUS NAMES OR NUMBERS: E4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1.0 mile

LENGTH ACCESSIBLE TO SALMON: 1.0 mile

AVERAGE WIDTH: 10' RANGE: 6'-20'

AVERAGE DEPTH: 6" RANGE: 4"-15"

TOTAL ACCESSIBLE SPAWNING AREA: 5,808 square yards (1.2 acres)

POTENTIAL SPAWNING AREA: 50%, 2,904 square yards (0.6 acre)

BOTTOM QUALITY: 3% <1/8", 40% 1/8"-3", 40% 3"-12", 17% >12". Good gravel below short canyon, fair gravel above short canyon. Bottom stable.

WATERSHED: 3 square miles. A small flat surrounded by rolling hills covered with dense spruce and birch forest. Creek emerges from a short canyon 100 yards from mouth. Source: a small lake.

GRADIENT: 150'/mile

WATER VELOCITY: 2.0 fps

FLOW: 8 cfs (July 3, 1962). Measured 25 yards above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (July 3, 1962)

WATER TEMPERATURE: 12.0° C. (July 3, 1962)

POOLS AND RIFFLES:

I 132.9 RUSSIAN CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: Aug. 15-Sept. 10

PEAK OF SPAWNING: Aug. 25-Sept. 1

DISTRIBUTION OF SPAWNERS: Heaviest spawning near mouth and above short canyon to lake. Some spawning in canyon in suitable gravel patches.

GENERAL INFORMATION

SHELTER: Good protection from northerly and easterly winds near mouth. Exposed to southerly and westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to overhanging brush. Source lake easily reached by taking trail on south side of creek. Passage over streambed difficult because of brush.

PERSONAL-USE FISHERY: A light personal-use fishery.

FISH SPECIES: Rainbow, cottids, sticklebacks.

WILDLIFE SPECIES:

REMARKS: Pedro Bay Village 1.2 miles northwest of creek.

I 132.9 RUSSIAN CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1962 8/11	A 1.0	0	0		Cover dense, no visibility

I 148.2 PILE RIVER (Iliamna Lake)

LOCATION: 59°48'12" N. 153°53'30" W.

PREVIOUS NAMES OR NUMBERS: D10

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 30.2 miles

LENGTH ACCESSIBLE TO SALMON: 30.2 miles

AVERAGE WIDTH: 100' RANGE: 70'-200'

AVERAGE DEPTH: 36" RANGE: 30"-60"

TOTAL ACCESSIBLE SPAWNING AREA: 1,771,924 square yards (366.1 acres)

POTENTIAL SPAWNING AREA: 13%, 230,384 square yards (47.6 acres)

BOTTOM QUALITY: 13% <1/8", 10% 1/8"-3", 20% 3"-12", 3% >12", 54% unknown. Poor spawning facilities due to coarse bottom, instability, and water velocities exceeding 5 fps.

WATERSHED: 115 square miles. A glacial valley heavily forested with spruce, birch, and cottonwood. Stream glacial and subject to occasional severe flooding. Falls above 6 miles. Source: surface runoff and glaciers.

GRADIENT: 52'/mile

WATER VELOCITY: 5.0 fps

FLOW: 250-300 cfs (July 25, 1962). RANGE:
Measured 0.3 miles from mouth, normal summer flow.

AIR TEMPERATURE: 22.0° C. (July 25, 1962)

WATER TEMPERATURE: 14.0° C. (July 25, 1962)

POOLS AND RIFFLES:

I 148.2 PILE RIVER (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 0-8,500

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 1-10

DISTRIBUTION OF SPAWNERS: An old river channel north of mouth major spawning area. Some spawning in lower few miles.

GENERAL INFORMATION

SHELTER: Good shelter for any boat in old river channel north of mouth.

SURVEY ROUTES AND METHODS: Aerial visibility good except during turbid water periods. Can be traveled by skiff for several miles.

PERSONAL-USE FISHERY: None since abandonment of Pile Bay village in 1952 or 1953.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Abandoned Pile Bay village lies 2 miles south of river mouth. Village northern terminus for Iliamna Bay-Pile Bay portage road.

I 148.2 PILE RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1921		G				Few	Has never had reputation for large numbers of fish
1928	8/14	G		20	0		Reports of good run in error
1930	9/4	G	3.0				Turbid, no fish seen
1931	8/25	G		8,500	0		Escapement estimated
1947	9/14	A	2.0				Fish present, no estimate
	9/14	G					Measured ♂ 43, ♀ 107
1948	9/8	G					Measured ♂ 100, ♀ 100
1949	9/8	A	2.0				No fish
1950	9/5	A					Few fish
1951	9/16	G					Few fish. Measured ♂ 12, ♀ 27
1952	9/12	A					Few fish
1953	9/3	A		200	0		
1954	9/6	A	5.0	40	0		No fish in main river
1955	9/11	A	1.0				Turbid
1956	8/17	A					No visibility
	9/6	A	5.0	6,000	Few		
1957	8/20	A					No visibility
1958	8/28	A					200 off mouth

I 148.2 PILE RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1959 9/6	A 5.0	450	0		
1960 8/28	A 2.0	0	0		
9/5	A 2.0	100	0		

I 149.0 SWAMP CREEK (Iliamna Lake)

LOCATION: 59°48'00" N. 153°52'24" W.

PREVIOUS NAMES OR NUMBERS: D9

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1.6 miles

LENGTH ACCESSIBLE TO SALMON: 1.6 miles

AVERAGE WIDTH: 10' RANGE: 6'-15'

AVERAGE DEPTH: 8" RANGE: 6"-12"

TOTAL ACCESSIBLE SPAWNING AREA: 9,196 square yards (1.9 acres)

POTENTIAL SPAWNING AREA: 19%, 1,936 square yards (0.4 acre)

BOTTOM QUALITY: 29% <1/8", 21% 1/8"-3", 19% 3"-12", 31% >12". Poor spawning facilities. Bottom stable.

WATERSHED: 7 square miles. A stream-cut canyon within a glacial valley. A large marshy lake at mouth. Spruce, cottonwood, and dense willow brush cover most of valley and surrounding hillsides. Source: a lake.

GRADIENT: 21'/mile

WATER VELOCITY: 2.0 fps

FLOW: 10 cfs (July 25, 1962). Measured 200'. from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 22.0° C. (July 25, 1962)

WATER TEMPERATURE: 17.0° C. (July 25, 1962)

POOLS AND RIFFLES:

I 149.0 SWAMP CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 0-14,100

TIME OF OCCUPANCY: Aug. 15-Sept. 30

PEAK OF SPAWNING: Sept. 1-15

DISTRIBUTION OF SPAWNERS: Spawning to lake in graveled sections.

GENERAL INFORMATION

SHELTER: Excellent shelter for any size boat available at Pile Bay village. Shelter for small craft available at creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Foot survey in lower 0.5 mile nearly impossible because of brush. Above this, best route along stream.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS:

I 149.0 SWAMP CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1930 9/4	G			Few	
1931 8/25	G 1.6	14,100	0		Possibly more present than counted
1948 9/9	G				Early run dead, new fish moving in
1949 9/8	A 1.6				No fish
1951 9/15	G 0.1	200	10		
9/18	G 1.0				Measured ♂ 5, ♀ 39; scales ♂ 25
1956 9/6	A 1.6	2,000	0		
1959 9/12	G 1.0	25	Few		

I 156.8 **ILIAMNA RIVER - MAIN STEM (Iliamna Lake)**

LOCATION: 59°44'12" N. 153°58'06" W.

PREVIOUS NAMES OR NUMBERS: D8

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 11.0 miles

LENGTH ACCESSIBLE TO SALMON: 11.0 miles

AVERAGE WIDTH: 100' | RANGE: 90'-200'

AVERAGE DEPTH: 48" | RANGE: 24"-120"

TOTAL ACCESSIBLE SPAWNING AREA: 645,656 square yards (133.4 acres)

POTENTIAL SPAWNING AREA: 37%, 239,096 square yards (49.4 acres)

BOTTOM QUALITY: Poor from mouth confluence of Chinkelyes Creek due to sand bottom, unstable. Fair spawning facilities from Chinkelyes Creek to forks, bottom fairly stable. Some sand and bedrock above Chinkelyes Creek.

WATERSHED: 201 square miles for entire system. A glacial valley parallel to southeast shore of Pile Bay. River forks 11 miles from mouth. Spruce, cottonwood, alder, birch, and willow along stream. Subject to frequent and sometimes severe flooding.

GRADIENT:

WATER VELOCITY: 0.4 fps

FLOW: 250 cfs (Sept. 18, 1960). Measured RANGE:
at bridge, river level receding.

AIR TEMPERATURE: 13.5° C. (Sept. 18, 1960)

WATER TEMPERATURE: 5.0° C. (Sept. 18, 1960)

POOLS AND RIFFLES:

I 156.8 ILIAMNA RIVER - MAIN STEM (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 5-95 (1956)

ESCAPEMENT RANGE: To 200,000. Poor survey timing has resulted in low estimates some years.

TIME OF OCCUPANCY: Aug. 1-Nov. 30

PEAK OF SPAWNING: Aug. 20-Nov. 1

DISTRIBUTION OF SPAWNERS: Almost all spawning from mouth of Chinkelyes Creek to forks, about 6 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter available for any boat in lower river near mouth.

SURVEY ROUTES AND METHODS: Aerial visibility excellent, considerable turbulence may be encountered. Ground survey below forks possible only with skiff.

PERSONAL-USE FISHERY: Annual personal-use fishery of varying intensity.

FISH SPECIES: Rainbow, Dolly Varden.

WILDLIFE SPECIES: Brown bear, moose, bald eagles, seagulls, golden-eye.

REMARKS: Old Iliamna, now abandoned, opposite mouth of Chinkelyes Creek, no structures remain.

I 156.8 **ILIAMNA RIVER - MAIN STEM (Iliamna Lake)**

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
						Note: Prior to 1962 estimates from both forks and main stem were combined.
1920	8/14	G 12.0			1,000	
	9/17	G 12.0			500	
1921		G 14.0			6,000	
1922					100,000	No direct reference to survey, but 15,000 in 1923, 15% of 1922 run
1923		G 6.0			15,000	
1924		G 10.0			300	Native fishery took 3,000, nearly entire run
1925		G			Few	Natives short on food supply
1926		G			10,000	Natives took 16,280 reds
1927	8/20	G 15.0			17,500	Most schooled in lower river
1928	8/16	G 13.0			60,000	75% spawning above village
1929	8/20	G 12.0			Few	Reports of late run in 1928
1930	8/10	G	100	0		Natives took 4,000 reds
1931	8/15	G 12.0			70,000	Fish schooled
	8/24	G 4.0	25,000	Many		
1936						Plentiful
1937						75% of capacity
1938						May have been overspawning

I 156.8 ILIAMNA RIVER - MAIN STEM (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1940 7/28					Good numbers
1947 9/15	G 7.5				Measured ♂ 47, ♀ 53. Some dead, many schooled in lower river
1948 9/8	G 4.0				Measured ♂ 119, ♀ 99
1949 9/8	A 6.0	0	0		
1950 9/5	A				Moderate numbers 5 miles up
1951 9/16	G 4.0				Measured ♂ 36, ♀ 91; scales ♂ 40
1952 9/12	A 7.0				Good numbers
1953 9/3	A	5,000	Few		
1954 9/6	A 11.0			2,000	
1955 10/5	A 16.0	3,000	0		
1956 8/17	A 10.0	68,000	Few		
9/6	A 12.0	20,000	Many		
9/27	G 10.0	115,000	Many		Measured ♂ 109, ♀ 130
1957 8/20	A 6.0			14,000	Count from forks not included
9/19	A 0.2				Flooding
9/29	A 5.0			13,900	
1958 8/28	A 0.2			10,000	
9/15	G 8.0			9,650	Most still schooled

I 156.8 **ILIAMNA RIVER - MAIN STEM (Iliamna Lake)**

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1959	9/5	G 16.0	27,000	Many		
	9/6	A 16.0	26,000			
1960	8/28	A 11.0	52,000	0		100,000 schooled in lower river
	9/5	A 11.0	31,000	9,000		Poor survey conditions
	9/16	A 10.0	28,000			Dead not visible
	9/23	A 12.0	10,500			Dead not estimated. Samples in 1960-Measured ♂ 40, ♀ 60; scales ♂ 40, ♀ 60
1961	9/2	A 11.0	23,000	0		Not well distributed
	9/4	G 11.0	7,500	3,200		Measured ♂ 40, ♀ 60; scales ♂ 40, ♀ 60
1962	9/3	A 11.0	16,300	900		Turbid. Fish moving upstream
	9/4	G 11.0				Measured ♂ 200, ♀ 200; scales ♂ 100, ♀ 100; otoliths ♂ 50, ♀ 50
	9/27	A 11.0	16,620	900		Water low and clear

I 156.8:11.0 ILIAMNA RIVER - RIGHT FORK (Iliamna River)

LOCATION: 59°48'00" N. 153°48'30" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 17.9 miles

LENGTH ACCESSIBLE TO SALMON: 17.9 miles

AVERAGE WIDTH: 85' RANGE: 60'-120'

AVERAGE DEPTH: 15" RANGE: 12"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 892,496 square yards (184.4 acres)

POTENTIAL SPAWNING AREA: 37%, 330,088 square yards (68.2 acres)

BOTTOM QUALITY: 35% <1/8", 55% 1/8"-3", 10% 3"-12". Good spawning gravel in lower miles, some rock and boulder, upper portion not well known, bottom fairly stable.

WATERSHED: A glacial valley heavily forested with spruce, birch, and cottonwood. Subject to occasional severe flooding. Source: mainly surface runoff, snowmelt.

GRADIENT: 91'/mile

WATER VELOCITY: 1.0 fps

FLOW: 200 cfs (Sept. 4, 1961). Measured 0.7 mile above forks, water level reading. RANGE:

AIR TEMPERATURE: 11.0° C. (Sept. 4, 1961)

WATER TEMPERATURE: 9.0° C. (Sept. 4, 1961)

POOLS AND RIFFLES:

I 156.8:11.0 **ILIAMNA RIVER** - RIGHT FORK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT:

ESCAPEMENT RANGE: To 3,100, Sept. 1962

TIME OF OCCUPANCY: See Iliamna River - **main stem.**

PEAK OF SPAWNING: See Iliamna River - **main stem.**

DISTRIBUTION OF SPAWNERS: Apparently almost to headwaters.

GENERAL INFORMATION

SHELTER: See Iliamna River - **main stem.**

SURVEY ROUTES AND METHODS: Aerial visibility good. Travel over streambed fairly easy.

PERSONAL-USE FISHERY: See Iliamna River - **main stem.**

FISH SPECIES: Rainbow, Dolly Varden.

WILDLIFE SPECIES:

REMARKS:

I 156.8:11.0 **ILIAMNA RIVER - RIGHT FORK (Iliamna River)**

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
						Note: Prior to 1962 estimates from Right Fork were combined with main stem estimates.
1962	9/3	A 8.0	2,700	400		
	9/27	A 18.0	150	10		

I 156.8:11.0 ILIAMNA RIVER - LEFT FORK (Iliamna River)

LOCATION: 59°48'00" N. 153°48'30" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 18.0 miles

LENGTH ACCESSIBLE TO SAIMON: 18.0 miles

AVERAGE WIDTH: 75' RANGE: 60'-100'

AVERAGE DEPTH: 24" RANGE: 18"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 792,308 square yards (163.7 acres)

POTENTIAL SPAWNING AREA: 37%, 293,304 square yards (60.6 acres)

BOTTOM QUALITY: 40% <1/8", 26% 1/8"-3", 23% 3"-12", 11% >12". Fair spawning gravel in lower part interspersed with rock and boulder, not well known above 6 miles. Bottom fairly stable.

WATERSHED: A glacial valley heavily forested with spruce, birch, and cottonwood. Subject to occasional severe flooding. Source: mainly surface runoff.

GRADIENT: 47'/mile

WATER VELOCITY: 4.0 fps

FLOW: 480 cfs (Sept. 4, 1962). Measured just above forks, water level receding. RANGE:

AIR TEMPERATURE: 19.0° C. (Sept. 4, 1962)

WATER TEMPERATURE: 12.5° C. (Sept. 4, 1962)

POOLS AND RIFFLES:

I 156.8:11.0 **ILIAMNA RIVER - LEFT FORK (Iliamna River)**

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT:

ESCAPEMENT RANGE:. To 10,300 Sept., 1962

TIME OF OCCUPANCY: See Iliamna River - main stem.

PEAK OF SPAWNING: See Iliamna River - main stem.

DISTRIBUTION OF SPAWNERS: Uncertain, but fish ascend several miles. Numerous side channels in lower part utilized.

GENERAL INFORMATION

SHELTER: See Iliamna River - main stem.

SURVEY ROUTES AND METHODS: Aerial visibility good.

PERSONAL-USE FISHERY: See Iliamna River - main stem.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS:

I 156.8:11.0 **ILIAMNA RIVER - LEFT FORK (Iliamna River)**

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
					Note: Prior to 1962 estimates from Left Fork were combined with main stem estimates.
1962 9/3	A 7.0	9,100	1,200		
9/27	A 18.0	3,160	2,032		

I 156.8:1.4L BEAR CREEK (Iliamna River)

LOCATION: 59°43'48" N. 153°56'00" W.

PREVIOUS NAMES OR NUMBERS: D8a

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.5 miles

LENGTH ACCESSIBLE TO SALMON: 0.9 mile

AVERAGE WIDTH: 12' RANGE: 7'-20'

AVERAGE DEPTH: 12" RANGE: 8"-18"

TOTAL ACCESSIBLE SPAWNING AREA: 6,292 square miles (1.3 acres)

POTENTIAL SPAWNING AREA: 24%, 1,452 square miles (0.3 acre)

BOTTOM QUALITY: 18% <1/8", 26% 1/8"-3", 34% 3"-12", 22% >12". Good spawning gravel in ponds, stream facilities poor except for suitable gravel patches. Bottom unstable in lower part.

WATERSHED: 7 square miles. Lower Creek flows across Iliamna River valley, upper part through steep, stream-cut canyon. Cottonwood, willow, and spruce along stream. Subject to frequent flood and channel changes below ponds. Beaver dams sometimes block passage to ponds. Source: springs, surface runoff.

GRADIENT:

WATER VELOCITY: 1.0 fps

FLOW: 10 cfs (July 22, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 23.0° C. (July 22, 1962)

WATER TEMPERATURE:: 8.0° C. (July 22, 1962)

POOLS AND RIFFLES:

I 156.8:1.4L BEAR CREEK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 150-2,110

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 1-30

DISTRIBUTION OF SPAWNERS: Almost all spawning in spring ponds where accessible.

GENERAL INFORMATION

SHELTER: Excellent shelter available at mouth of creek in Iliamna River.

SURVEY ROUTES AND METHODS: Aerial visibility good. Creek easily waded after first 100 yards.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 156.8:1.4L BEAR CREEK (Iliamna River)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1959	9/4	G 0.7	146	0		Beaver dams block all ponds
1960	8/28	A 1.0	2,000	0		
	9/5	A 1.0	2,000	0		
	9/16	A 1.0	2,000	0		
	9/23	A 1.0			2,000	
1962	9/3	A 1.0	2,110	0		

I 156.8:2.6L FALSE CREEK (Iliamna River)

LOCATION: 59°44'12" N. 153°54'54" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 0.2 mile

LENGTH ACCESSIBLE TO SALMON: 0.2 mile

AVERAGE WIDTH: 10' RANGE: 7'-12'

AVERAGE DEPTH: 8" RANGE: 6"-12"

TOTAL ACCESSIBLE SPAWNING AREA: 968 square yards (0.2 acre)

POTENTIAL SPAWNING AREA: 50%, 484 square yards (0.1 acre)

BOTTOM QUALITY: 30% <1/8", 45% 1/8"-3", 20% 3"-12", 5% >12". Fair spawning gravel, some silt in places. Bottom stable.

WATERSHED: 2 square miles. A spring-fed creek flowing across Iliamna River valley. Cottonwood, spruce, birch, and willow along creek. Subject to occasional flood. Source: springs and surface runoff.

GRADIENT:

WATER VELOCITY: 0.1 fps

FLOW: 1 cfs (July 22, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 24.0° C. (July 22, 1962)

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 156.8:2.6L FALSE CREEK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter available at mouth of creek in Iliamna River.

SURVEY ROUTES AND METHODS: Aerial visibility fair, stream easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: First surveyed in 1962.

I 156.8:2.7L OLD WILLIAMS CREEK (Iliamna River)

LOCATION: 59°44'18" N. 153°54'12" W.

PREVIOUS NAMES OR NUMBERS: D8b

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 8.9 miles

LENGTH ACCESSIBLE TO SALMON: 1.1 miles

AVERAGE WIDTH: 20' RANGE: 15'-25'

AVERAGE DEPTH: 18" RANGE: 9"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 13,068 square yards (2.7 acres)

POTENTIAL SPAWNING AREA: 17%, 1,936 square yards (0.4 acre)

BOTTOM QUALITY: 17% <1/8", 40% 1/8"-3", 33% 3"-12", 10% >12". Poor spawning facilities. Silt in lower reaches, rubble bottom below accessible limit. Bottom fairly stable.

WATERSHED: 20 square miles. Lower part flows across Iliamna River valley, upper portion through a stream-cut valley. Subject to occasional flooding.

GRADIENT:

WATER VELOCITY: 2.5 fps

FLOW: 60 cfs (July 22, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 23.0° C. (July 22, 1962)

WATER TEMPERATURE: 11.5° C. (July 22, 1962)

POOLS AND RIFFLES:

I 156.8:2.7L OLD WILLIAMS CREEK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter available at creek mouth in Iliamna River.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Creek wadable above mouth.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 156.8:4.4L CHINKELYES CREEK (Iliamna River)

LOCATION: 59°44'48" N. 154°52'18" W.

PREVIOUS NAMES OR NUMBERS: D8c

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 15.0 miles

LENGTH ACCESSIBLE TO SALMON: 11.0 miles

AVERAGE WIDTH: 50' RANGE: 35'-75'

AVERAGE DEPTH: 14" RANGE: 10"-36"

TOTAL ACCESSIBLE SPAWNING AREA: 439,956 square yards (90.9 acres)

POTENTIAL SPAWNING AREA: 20%, 86,636 square yards (17.9 acres)

BOTTOM QUALITY: 10% <1/8", 80% 1/8"-3", 10% 3"-12". Excellent spawning gravel in lower 2 miles, little if any potential beyond 2 miles. Bottom fairly stable.

WATERSHED: 34 square miles. A glacial valley with dense spruce, cottonwood, and birch in lower part, upper part open and above timber line. Subject to frequent flood. Portage road from Iliamna Bay to Pile Bay adjacent to stream for many miles. Source: several small lakes and surface runoff.

GRADIENT: 29'/mile

WATER VELOCITY: 2.0 fps

FLOW: 95 cfs (July 2, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 14.0 ° C. (July 2, 1962)

WATER TEMPERATURE: 6.0° C. (July 2, 1962)

POOLS AND RIFFLES:

I 156.8:4.41 CHINKELYES CREEK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 50-5,000

TIME OF OCCUPANCY: Aug. 15-Sept. 30

PEAK OF SPAWNING: Sept. 1-10

DISTRIBUTION OF SPAWNERS: All spawning in lower 2 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter at mouth or in slough opposite mouth for small boats only.

SURVEY ROUTES AND METHODS:

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS: Old Foss homestead lies 400 yards up Iliamna River from mouth of Chinkelyes Creek. Site of Old Iliamna opposite mouth of Chinkelyes Creek, no structures remain.

I 156.8:4.4L CHINKELYES CREEK (Iliamna River)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1931 8/15	G				Filled to capacity
1955 9/11	A 11.0	50	0		
1959 9/4	G 2.0	1,720	360		All spawning
9/6	A 11.0	2,500	0		
1960 8/28	A 2.0	4,000	0		
9/5	A 11.0	3,000	Few		Air too rough for count of dead
9/16	A 2.0	2,000	0		Dead obscured by flood
9/17	G 1.0	900	1,250		
9/23	A 1.0	0	0		
1961 9/2	A 2.0	5,000	0		Not well distributed
9/2	G 2.0	1,855	2,715		Just beginning to spawn
1962 9/3	A 2.0	3,500	1,700		Peak of spawning

I 164.8 JACK DURAND CREEK (Iliamna Lake)

LOCATION: 59°42'30" N. 154° 01'42" W.

PREVIOUS NAMES OR NUMBERS: D7

U.S.G.S. MAP: Iliamna, 1:25,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 2.5 miles

LENGTH ACCESSIBLE TO SALMON: 2.5 miles

AVERAGE WIDTH: 10' RANGE: 5'-18'

AVERAGE DEPTH: 9" RANGE: 8"-16"

TOTAL ACCESSIBLE SPAWNING AREA: 14,520 square yards (3.0 acres)

POTENTIAL SPAWNING AREA: 45%, 6,776 square yards (1.4 acres)

BOTTOM QUALITY: Fair gravel in lower mile, much rubble beyond 1 mile, bottom stable.

WATERSHED: 6 square miles. Lower mile a broad flat heavily forested with spruce and birch, upper part a steep, stream-cut canyon. Source: springs and surface runoff.

GRADIENT: 376'/mile to 0.6 mile; 928'/mile from 0.6-2.5 miles

WATER VELOCITY: 2.0 cfs

FLOW: 13 cfs (July 3, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 17.0° C. (July 3, 1962)

WATER TEMPERATURE: 6.0° C. (July 3, 1962)

POOLS AND RIFFLES:

I 164.8 JACK DURAND CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: To 900 in 1962

TIME OF OCCUPANCY: Aug. 15-Sept. 30

PEAK OF SPAWNING: Sept. 1-20

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Mouth partially protected from easterly and westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Exits east of Finger Beach spawning area.

I 164.8 JACK DURAND CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1962 8/11	A 2.5	600	0		
9/3	A 1.0	800	100		1,500 off mouth

I 170.9 SQUIRREL VILLAGE CREEK (Iliamna Lake)

LOCATION: 59°39'24" N. 154°16'12" W.

PREVIOUS NAMES OR NUMBERS: D4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 3.0 miles

LENGTH ACCESSIBLE TO SALMON: 3.0 miles

AVERAGE WIDTH: 8' RANGE: 3'-12'

AVERAGE DEPTH: 7" RANGE: 6"-10"

TOTAL ACCESSIBLE SPAWNING AREA: 14,036 square yards (2.9 acres)

POTENTIAL SPAWNING AREA: 45%, 6,292 square yards (1.3 acres)

BOTTOM QUALITY: 5% <1/8", 45% 1/8"-3", 40% 3"-12", 10% >12". Good gravel near mouth, bottom becomes coarse after 0.3 mile. Bottom stable.

WATERSHED: 5 square miles. Lower 1.5 miles a broad flat heavily forested with spruce and birch, above this gradient steep through stream-cut canyon. Source: mainly surface runoff and springs in lower part.

GRADIENT: 290'/mile

WATER VELOCITY: 3.0 fps

FLOW: 10 cfs (July 3, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 15.0° C. (July 3, 1962)

WATER TEMPERATURE: 5.0° C. (July 3, 1962)

POOLS AND RIFFLES:

I 170.9 SQUIRREL VILLAGE CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 24-2,000

TIME OF OCCUPANCY: Aug. 1-Sept. 15

PEAK OF SPAWNING: Aug. 20-Sept. 10

DISTRIBUTION OF SPAWNERS: Most spawning in lower 0.3 mile, fish ascend more than 1.3 miles upstream. Fish enter small tributary near mouth, but distribution unknown.

GENERAL INFORMATION

SHELTER: Good shelter at mouth from southerly and easterly winds, mouth exposed to northerly and westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by brush after first 100 yards. Easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES:

REMARKS: Natives, at one time, camped and hunted squirrels in adjacent moutains, hence the name of the creek.

I 170.9 SQUIRREL VILLIAGE CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1958 7/29	G 0.1	24	0		1,000 off mouth
8/20	G 1.25	248	0		
9/15	G 0.25	80	0		Schooled in outlet slough, few fish in stream
1959 9/6	A 0.1	550	Few		
1960 8/21	G 1.5	900	1,265		
1961 7/21	A 0.25				3,000 off mouth
1962 8/11	A 2.0	500	0		150 off mouth
9/3	A 2.0	350	Few		

I 183.9 TOMMY RIVER (Iliamna Lake)

LOCATION: 59°36'54" N. 154°34'54" W.

PREVIOUS NAMES OR NUMBERS: D1

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 13.8 miles

LENGTH ACCESSIBLE TO SALMON: 13.8 miles

AVERAGE WIDTH: 20' RANGE: 15'-35'

AVERAGE DEPTH: 12" RANGE: 9"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 162,140 square yards (33.5 acres)

POTENTIAL SPAWNING AREA: 60%, 97,284 square yards (20.1 acres)

BOTTOM QUALITY: 18% <1/8", 40% 1/8"-3", 36% 3"-12", 6% >12". Good spawning gravel in lower 5 miles, bottom coarse above 5 miles, fairly stable.

WATERSHED: 20 square miles. Lower 2 miles a broad flat covered with cottonwood, above this a steep, stream-cut canyon. Source: a few small lakes and surface runoff.

GRADIENT: 108'/mile

WATER VELOCITY: 2.0 fps

FLOW: 32 cfs (Aug. 20, 1962). Measured above outlet slough, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (Aug. 20, 1962)

WATER TEMPERATURE: 13.5° C. (Aug. 20, 1962)

POOLS AND RIFFLES:

I 183.9 TOMMY RIVER (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 50-10,000

TIME OF OCCUPANCY: Aug. 5-Sept. 25

PEAK OF SPAWNING: Aug. 15-Sept. 15

DISTRIBUTION OF SPAWNERS: Heavy spawning throughout lower 2 miles and in a side channel near mouth. Fish ascend 5 miles, possibly more.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility partially obscured by overhanging trees. Easily waded above outlet slough.

PERSONAL-USE FISHERY: None since about 1920.

FISH SPECIES: Dolly Varden, rainbow.

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS:

I 183.9 TOMMY RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1930 8/31	G	360	0		One-third very small fish
1931 8/13	G			4,700	Many trout observed
1947 9/12	A 3.5				Many fish
9/12	G				Measured ♂ 38, ♀ 102
1953 9/3	A				Few fish
9/6	A				Turbid, no fish observed
1954 9/5	A 1.0	300	Few		
1955 9/9	G 1.0	59			Some dead. Stream steep, appears subject to flood
9/11	A 1.0	100	0		Fish in side slough
10/7	A	0	0		
1956 8/10	G 5.0	10,000	Few		
9/6	A 5.0	1,750	500		Most fish in lower portion
1957 8/20	A 2.0	2,000	0		
8/28	G 2.0	3,400	Many		
9/6	G 0.1				Dead numerous. Measured ♂ 81, ♀ 121; scales ♂ 40, ♀ 40
9/25	A 2.0	500			Fish in a side slough
1958 8/15	G 2.0	845	0		750 off mouth

I 183.9 TOMMY RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1958 8/27	A 0.1	200	0		500 off mouth
9/5	G 2.0	955	20		
1959 8/21	G 2.0	2,196	Few		
9/6	A 0.1	400	0		
1960 8/28	A 13.8	100	0		100 off mouth
9/5	A 5.0	550	0		Fish in lower portion
9/23	A 2.0	0	0		
1961 7/21	A 13.8				5,000 off mouth
9/13	A 13.8	100	0		Turbid
1962 8/11	A 8.0	1,500	0		2,000 off mouth
8/20	G 3.5	2,530	859		Measured ♂ 200, ♀ 200; scales ♂ 72, ♀ 80; otoliths ♂ 50, ♀ 50
9/3	A 3.0	220	0		In lower river, past peak

I 183.9 TOMMY SPRINGS (Iliamna Lake)

LOCATION: 59°36'54" N. 154°34'54" W.

PREVIOUS NAMES OR NUMBERS: D3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 220 yards

LENGTH ACCESSIBLE TO SALMON: 200 yards

AVERAGE WIDTH: 15' RANGE: 2'-25'

AVERAGE DEPTH: 19" RANGE: 18"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 968 square yards (0.2 acre)

POTENTIAL SPAWNING AREA: 100%, 968 square yards (0.2 acre)

BOTTOM QUALITY: 37% <1/8", 36% 1/8"-3", 27% 3"-12". Good spawning gravel throughout. Bottom stable.

WATERSHED: 0.5 square mile. Flat area adjacent to Tommy River, forested with spruce, birch, and cottonwood, several adjacent swamps. Spring area irregular with numerous channels. Source: springs.

GRADIENT:

WATER VELOCITY: 0.5 fps

FLOW: 2 cfs (Aug. 21, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 16.0° C. (Aug. 21, 1962)

WATER TEMPERATURE: 8.0° C. (Aug. 21, 1962)

POOLS AND RIFFLES:

I 183.9 TOMMY SPRINGS (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 50-1,000

TIME OF OCCUPANCY: Aug. 10-Oct. 15

PEAK OF SPAWNING: Sept. 1-Oct. 10

DISTRIBUTION OF SPAWNERS: Spawning throughout spring area.

GENERAL INFORMATION

SHELTER: Excellent shelter in Tommy River outlet slough. A small bay at spring outlet offers partial protection from westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility partially obscured by overhanging brush and grass. Easily waded except when lake level exceptionally high.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 183.9 TOMMY SPRINGS (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 8/28	G 0.1	370	0		200 off mouth
9/6	G 0.1	500	0		
9/25	A 0.1				250 off mouth
1958 8/15	G 0.1	50	0		Survey difficult without boat due to high lake level
8/27	A 0.1	50	0		150 off mouth
9/5	G 0.1	300	0		
1959 8/21	G 0.1	150	0		600 off mouth
9/6	A 0.1	300	0		
1960 8/28	A 0.1	500	0		
9/5	A 0.1	350	0		
9/16	A 0.1	1,000	Few		
9/23	A 0.1	500	Few		Unable to count dead
1961 9/13	A 0.1	100	Few		
1962 8/11	A 0.1	100	0		200 off mouth
8/21	G 0.1	248	0		400 off mouth
9/2	A 0.1	210	0		

I 211.5 NANCY CREEK (Iliamna Lake)

LOCATION: 59°31'48" N. 154° 31'48" W.

PREVIOUS NAMES OR NUMBERS: C6

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 2.0 miles

LENGTH ACCESSIBLE TO SALMON: 0.7 mile

AVERAGE WIDTH: 3' RANGE: 2'-5'

AVERAGE DEPTH: 6" RANGE: 4"-12"

TOTAL ACCESSIBLE SPAWNING AREA: 1,452 square yards (0.3 acre)

POTENTIAL SPAWNING AREA: 45%, 484 square yards (0.1 acre)

BOTTOM QUALITY: 34% <1/8", 64% 1/8"-3", 2% 3"-12". Good gravel in lower 0.5 mile, rubble beyond, bottom stable.

WATERSHED: 4 square miles. A shallow stream-cut valley through rolling hills forested with spruce, birch, and cottonwood. Source: surface runoff and springs. Blocked by brush jam 0.7 mile from mouth.

GRADIENT: 150'/mile

WATER VELOCITY: 1.0 fps

FLOW: 2 cfs (June 24, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 13.0 C. (June 24, 1962)

WATER TEMPERATURE: 6.0° C. (June 24, 1962)

POOLS AND RIFFLES:

I 211.5 NANCY CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: To 300 in 1962

TIME OF OCCUPANCY: Aug. 5-Sept. 10

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Excellent shelter for boats of any size in bay at mouth.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by brush. Creek easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Cottids.

WILDLIFE SPECIES:

REMARKS:

I 211.5 NANCY CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 7/17	G 0.1				100 off mouth
8/2	G 1.0				150 off mouth
1962 8/11	A 2.0	300	0		

I 213.6 POPE CREEK (Iliamna Lake)

LOCATION: 59°33'30" N. 154°30'12" W.

PREVIOUS NAMES OR NUMBERS: C5

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1.3 miles

LENGTH ACCESSIBLE TO SALMON: 0.7 mile

AVERAGE WIDTH: 3' RANGE: 2'-4'

AVERAGE DEPTH: 7" RANGE: 5"-14"

TOTAL ACCESSIBLE SPAWNING AREA: 1,452 square yards (0.3 acre)

POTENTIAL SPAWNING AREA: 43%, 484 square yards (0.1 acre)

BOTTOM QUALITY: 9% <1/8", 66% 1/8"-3", 20% 3"-12", 5% >12". Good gravel in lower 0.5 mile, bottom coarse beyond. Bottom stable.

WATERSHED: 3 square miles. A shallow stream-cut valley through rolling hills forested with spruce and birch. Blocked by beaver dam 0.7 mile from mouth. Source: a small pond and surface runoff.

GRADIENT: 192'/mile

WATER VELOCITY: 1.0 fps

FLOW: 2 cfs (June 24, 1962). Measured at mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 12.0° C. (June 24, 1962)

WATER TEMPERATURE: 5.0° C. (June 24, 1962)

POOLS AND RIFFLES:

I 213.6 POPE CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: Aug. 5-Sept. 10

PEAK OF SPAWNING: Aug. 20-Sept. 1

DISTRIBUTION OF SPAWNERS: Lower 0.25 mile utilized, fish may ascend further.

GENERAL INFORMATION

SHELTER: Good shelter for any boat available near mouth.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by brush. Creek easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Cottids.

WILDLIFE SPECIES:

REMARKS:

I 213.6 POPE CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 8/21	G 0.3	46	0		500 off mouth
8/27	G 0.3	250	0		
1962 8/11	A 0.1	0	0		600 off mouth

I 214.5 NICK G. CREEK (Iliamna Lake)

LOCATION: 59°33'12" N. 154°29'54" W.

PREVIOUS NAMES OR NUMBERS: C4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.0 miles

LENGTH ACCESSIBLE TO SALMON: 0.5 mile

AVERAGE WIDTH: 15' RANGE: 8'-20'

AVERAGE DEPTH: 10" RANGE: 8"-15"

TOTAL ACCESSIBLE SPAWNING AREA: 4,356 square yards (0.9 acre)

POTENTIAL SPAWNING AREA: 90%, 3,872 square yards (0.8 acre)

BOTTOM QUALITY: 10% <1/8", 56% 1/8"-3", 32% 3"-12", 2% >12". Excellent spawning gravel in right fork to falls, some rubble near falls, bottom stable. Left fork nonspawnable due to rubble.

WATERSHED: 8 square miles. A shallow stream-cut valley through rolling hills forested with spruce, birch, and cottonwood. Falls 0.5 mile from mouth impassable. Source: three small lakes.

GRADIENT: 50'/0.5 mile below falls

WATER VELOCITY: 2.0 fps

FLOW: 12 cfs (Aug. 4, 1961). Measured on right fork just above forks, normal summer flow. RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

I 214.5 NICK G. CREEK (Iliamna River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 38-5,000

TIME OF OCCUPANCY: Aug. 1-Sept. 20

PEAK OF SPAWNING: Aug. 10-30

DISTRIBUTION OF SPAWNERS: Virtually all spawning in right fork, a few fish may spawn immediately below forks.

GENERAL INFORMATION

SHELTER: Excellent shelter available near creek mouth for any size vessel.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by brush. Creek easily waded.

PERSONAL-USE FISHERY: A heavy annual personal-use fishery that may take 80% of run some years.

FISH SPECIES: Dolly Varden, rainbow, whitefish, cottids, sticklebacks above falls.

WILDLIFE SPECIES:

REMARKS: Pope and Kennoy residences located at mouth.

I 214.5 NICK G. CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1928 8/15	G 0.5			2,000	Most spawned out
1930 8/28	G 0.5			470	
1955 9/4	G 0.5	34	4		An excellent stream
1956 8/20	G 0.5	4,800	200		
9/17	G 0.5	0	1,600		Dead decomposed
1957 7/28	G 0.5	0	0		250 off mouth
8/15	G 0.5	2,900	50		
8/21	G 0.5	2,700	Many		Measured ♂ 103, ♀ 101; scales ♂ 40, ♀ 40
1958 8/15	G 0.5	420	0		Fishery took 800
9/7	G 0.5				Measurements ♂ 20, ♀ 76; scales ♂ 20, ♀ 20
1959 8/20	G 0.5	484	0		Fishery took 2,000
1960 8/28	A 0.5				No estimate, not crowded
9/5	G 0.5	160	1,000		
1961 8/5	G 0.5	265	0		Well distributed
1962 8/11	A 0.5	600	0		
8/22	G 0.5				Measured ♂ 165, ♀ 200

I 217.1 COPPER RIVER (Iliamna Lake)

LOCATION: 59°31'30" N. 154°31'00" W.

PREVIOUS NAMES OR NUMBERS: C3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 32.0 miles

LENGTH ACCESSIBLE TO SALMON: 12.0 miles

AVERAGE WIDTH: 70' RANGE: 50'-120'

AVERAGE DEPTH: 24" RANGE: 18"-144"

TOTAL ACCESSIBLE SPAWNING AREA: 493,680 square yards (102.0 acres)

POTENTIAL SPAWNING AREA: 66%, 325,732 square yards (67.3 acres)

BOTTOM QUALITY: 7% <1/8", 61% 1/8"-3", 26% 3"-12", 6% >12". Excellent spawning facilities in lower 6 miles, some suitable area from 6 miles to falls. Bottom stable. Bottom above falls nonspawnable due to rubble and bedrock.

WATERSHED: 128 square miles. A stream-cut valley through rolling hills, dense willow, alder, and birch thickets along stream, spruce forest on hills. Source: meadow lake. A 32' falls 12 miles from mouth impassable.

GRADIENT: 17'/mile below falls

WATER VELOCITY: 3.2 fps (Aug. 1961, average of 9 observations)

FLOW: 480 cfs (Sept. 4, 1961). Measured 6 miles from falls, water level receding. RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE: 12.7° C. (Aug. 1961, average of 27 observations)

POOLS AND RIFFLES:

I 217.1 COPPER RIVER (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 10% (1956)

ESCAPEMENT RANGE: 10,000-1,000,000

TIME OF OCCUPANCY: July 10-Sept. 20

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: Spawning occurs to falls and in numerous side channels in lower 3 miles. In years of low abundance, lower 6 miles more heavily utilized. Three tributaries support runs, but little known about them.

GENERAL INFORMATION

SHELTER: Excellent shelter available in river and near mouth. Extensive weed-covered flats off mouth curtail passage for larger vessels. Walker's cabin 0.75 mile from mouth.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Foot survey in lower mile difficult without skiff. Wadable in places during normal flow.

PERSONAL-USE FISHERY: No regular fishery.

FISH SPECIES: Dolly Varden, rainbow, suckers, whitefish, northern pike, cottids, sticklebacks.

WILDLIFE SPECIES: Brown bear, moose, wolverine, wolf, mink, spruce hens, ptarmigan, mallards, widgeon, green-winged teal, shovellers, harlequins, seagulls.

REMARKS:

I 217.1 COPPER RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1921		G 10.0			300,000	Excellent stream
1922	8/28	G 12.0			1,000,000	Overspawning
1923		G 5.0			150,000	
1924	7/8	G 0.1				Several thousand schooled at mouth
	8/11	G 4.0			150,000	Not too many above 4 miles
1925		G	12,500	12,500		Small fish
1926		G			200,000	A few early eggs dug up
1927	8/11	G 10.0			75,000	No spawning yet
1928	8/12	G 8.0			250,000	Early stages of spawning
1929	8/14	G 5.0			150,000	Turbid
1930	8/30	G	6,700	3,500		
1937	8/15					60% capacity
1938						Heavily populated
1947	9/5	A 2.0				Much spawning, 80% dead
	9/5	G				Measured ♂ 50, ♀ 55
1948	9/9	A 5.0				Many dead
1952	9/11	A 5.0				Many dead, peak 10-14 days past
	9/11	G				Measured ♂ 98, ♀ 102; scales ♂ 40
1953	9/3	A 5.0	Few	Few		Few dead above 4-5 miles

I 217.1 COPPER RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1954	9/5	A 8.0	3,500	11,000		Poor estimates
	9/5	G				Measured ♂ 119, ♀ 130; scales ♂ 40
1955	9/5	G 6.0	6,500	4,500		Excellent stream. Measured ♀ 118
	9/11	A 12.0				Many dead. Good run in upper river
1956	7/20	G 6.0	45,000	0		
	8/8	G 3.0	45,000	0		
	8/16	G 4.0	100,000	0		
	8/20	A 12.0	440,000	Few		
	9/9	A 12.0	13,000	9,000		
	9/18	G 6.0				Few live, many dead. Measured ♂ 536, ♀ 549
1957	7/13	G 4.0	1,390	0		Fish fresh, moving
	7/20	G 4.0	20,000	0		
	7/23	G 8.0	31,900	0		Beginning to spread over riffles
	8/9	G 8.0	44,500	0		
	8/20	A 12.0			70,000	
	8/30	G 4.0				Measured ♂ 508, ♀ 645; scales ♂ 140, ♀ 140
	9/4	G				No fish seen
1958	8/16	G 4.5				Much spawning
	9/4	A 12.0	1,200	3,000		

I 217.1 COPPER RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1958 9/6	G 2.0	Few	20,000		Measured ♂ 324, ♀ 580; scales ♂ 80, ♀ 80
1959 8/2	G 2.4	8,000	0		
8/19	G 4.0	35,000	0		Considerable spawning
9/6	A 12.0	13,000	4,000		
9/18	A 12.0	Few	Many		
1960 8/17	G 5.0	45,900	Few		
8/28	A 12.0	139,000			Thousands of dead
9/5	A 12.0	9,000	30,000		Dead estimate low
9/6	G 3.0				Measured ♂ 60, ♀ 60; scales ♂ 60, ♀ 60
9/16	A 12.0			1,000	
1961 8/14	A 12.0	120,000	0		Well distributed throughout stream
9/2	A 12.0	12,000			No dead count. Fish mostly in lower 6 miles
9/5	G 12.0	485	14,000		Dead count conservative. Measured ♂ 15, ♀ 295; scales ♂ 15, ♀ 295
1962 8/11	A 12.0	43,300	0		
8/23	G 4.0				Measured ♂ 396, ♀ 400; scales ♂ 100, ♀ 100; otoliths ♂ 50, ♀ 50
9/3	A 12.0	19,500	12,800		5-7 days past peak

I 266.6 ALEC FLYUM CREEK (Iliamna Lake)

LOCATION: 59°28'36" N. 154°30'00" W.

PREVIOUS NAMES OR NUMBERS: C2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 2.0 miles

LENGTH ACCESSIBLE TO SALMON: 2.0 miles

AVERAGE WIDTH: 9' RANGE: 4'-15'

AVERAGE DEPTH: 8" RANGE: 4"-12"

TOTAL ACCESSIBLE SPAWNING AREA: 10,648 square yards (2.2 acres)

POTENTIAL SPAWNING AREA: 93%, 9,680 square yards (2.0 acres)

BOTTOM QUALITY: 73% 1/8"-3", 27% 3"-12". Excellent gravel throughout stream, scattered patches of bedrock, stable.

WATERSHED: 3 square miles. Shallow stream-cut valley through rolling hills, forested with spruce, dense willow along stream. A small falls 0.7 mile from mouth may be impassable during low flow periods. Source: a small lake.

GRADIENT:

WATER VELOCITY: 1.6 fps

FLOW: 7 cfs (July 29, 1962). Measured just above outlet slough, normal summer flow. RANGE:

AIR TEMPERATURE: 22.0° C. (July 29, 1962)

WATER TEMPERATURE: 10.0° C. (July 29, 1962)

POOLS AND RIFFLES:

I 266.6 ALEC FLYUM CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMEMENT RANGE: 82-7,900

TIME OF OCCUPANCY: Aug. 10-Sept. 15

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: Spawning throughout, heaviest in lower 0.7 mile.

GENERAL INFORMATION

SHELTER: Excellent shelter available at and near mouth.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by overhanging brush. Creek easily waded, banks nearly impassable due to brush. Good game trails on south side of creek.

PERSONAL-USE FISHERY: None since 1955.

FISH SPECIES: Rainbow, Dolly Varden, coho.

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS: An abandoned reindeer station located in small bay immediately north of creek mouth. A soda spring located on west shore of same bay, temperature 37° F., water highly carbonated.

I 266.6 ALEC FLYUM CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1955 9/4	G 0.5	39	43		An excellent stream
1956 8/13	G 0.5	2,000	0		
1957 8/6	G 0.5				200 off mouth
8/19	G 0.7	1,063	207		Measured ♂ 57, ♀ 36
1958 8/17	G 0.7	1,490	200		150 bear kills
1959 9/6	A 0.5	200	400		Difficult to see
1960 8/19	G 1.5	6,100	1,800		3,000 off mouth
8/29	A 2.0				Many live and dead, 500 off mouth
1961 8/14	A 1.0			1,000	1,000 off mouth
1962 7/29	G 0.7				50 off mouth
8/11	A 2.0	50	50		200 off mouth

I 278.7 KAKHONAK RIVER (Iliamna Lake)

LOCATION: 59°26'54" N. 154°29'00" W.

PREVIOUS NAMES OR NUMBERS: B5

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 8.8 miles

LENGTH ACCESSIBLE TO SALMON: 8.8 miles

AVERAGE WIDTH: 140' RANGE: 80'-1,200'

AVERAGE DEPTH: 48"-60" RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 723,096 square yards (149.4 acres)

POTENTIAL SPAWNING AREA: 6%, 43,560 square yards (9.0 acres)

BOTTOM QUALITY: Poor spawning facilities. Most of bottom either sand, or boulder and bedrock. Bottom fairly stable.

WATERSHED: 149 square miles. Shallow stream-cut canyon through rolling hills, with thin spruce forest. Glacier-cut mountainous headwaters. Majority of river a series of large pools connected by rapids. Four falls between Kakhonak Lake and Iliamna Lake, heights from 5'-20'. Falls at lake impassable. Falls at mouth a partial block. Source: Kakhonak Lake.

GRADIENT: 22'/mile

WATER VELOCITY: 5.0 fps between pools

FLOW: 1,200 cfs (July 12, 1962). RANGE:
Measured below Kakhonak Lake, river level up 18" due to strong east wind and heavy rain.

AIR TEMPERATURE: 14.0° C. (July 12, 1962)

WATER TEMPERATURE: 13.0° C. (July 12, 1962)

POOLS AND RIFFLES:

I 278.7 KAKHONAK RIVER (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1958)

ESCAPEMENT RANGE: 0-2,000

TIME OF OCCUPANCY: July 25-Sept. 30

PEAK OF SPAWNING: Sept. 1-10

DISTRIBUTION OF SPAWNERS: Spawning at various scattered points, but heaviest just below lower falls.

GENERAL INFORMATION

SHELTER: Excellent shelter available for any boat at mouth of river.

SURVEY ROUTES AND METHODS: Aerial visibility good. Ground survey practically impossible, drifting hazardous and difficult because of rapids.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, lake trout, whitefish, grayling.

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS: A hunting and fishing lodge located near lower falls. A fishway constructed at lower falls in 1921, washed out in fall of 1923. A close inspection of the Kakhonak river system made by ADF in 1956. Account of trip appears in annual report of that year.

I 278.7 KAKHONAK RIVER (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1920 Aug.	G 0.1	450	0		Fishway needed
1921 8/20	G 0.1	1,500	0		Fishway cut into rock of S. shore
1922	G 6.0	2,000	0		Three falls plus one at mouth
1923	G	1,500	0		No direct survey reference, 500 fish in 1924, one-third of last years run
1924 8/10	G 5.0	500	0		Fishway washed out last fall
1947 9/12	A 20.0	100	2		Most spawning below lower falls
1952 9/11	A				None above upper falls
1954 9/5	A 4.5				No fish
1955 9/1	G 1.5	225	0		All below lower falls
9/11	A 8.8	200	11		Live below falls, dead between falls and lake
1958 8/17	G 0.1	250	0		Fish apparently not getting over falls
1959 9/6	A 8.8	100	Few		All fish 2 miles up
1960 8/28	A 8.8				None above falls, few below
1962 7/29	G 0.1				Few below falls. Several made it over

I 287.9' CABIN CREEK (Iliamna Lake)

LOCATION: 59°25'18" N 154°29'12" W.

PREVIOUS NAMES OR NUMBERS: B4, Neilson Creek

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 2.0 miles

LENGTH ACCESSIBLE TO SALMON: 2.0 miles

AVERAGE WIDTH: 9' | RANGE: 5'-15'

AVERAGE DEPTH: 9" | RANGE: 4"-18"

TOTAL ACCESSIBLE SPAWNING AREA: 10,648 square yards (2.2 acres)

POTENTIAL SPAWNING AREA: 10%, 968 square yards (0.2 acre)

BOTTOM QUALITY: 38% <1/8", 17% 1/8"-3", 38% 3"-12", 7% >12". Poor spawning facilities after 0.2 mile due to sand, silt, and mud. Unstable.

WATERSHED: 12 square miles. A shallow stream-cut valley through rolling hills; birch, alder, and spruce on hills and along stream. Source: several small lakes and marshes.

GRADIENT: 49'/mile

WATER VELOCITY: 1.0 fps

FLOW: 5 cfs (July 30, 1962). Measured 1.5 miles from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 21.5° C. (July 30, 1962)

WATER TEMPERATURE: 11.5° C. (July 30, 1962)

POOLS AND RIFFLES:

I 287.9 CABIN CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 28-250

TIME OF OCCUPANCY: Aug. 10-Sept. 15

PEAK OF SPAWNING: Aug. 20-Sept. 5

DISTRIBUTION OF SPAWNERS: Spawning probably only in lower 0.2 mile. Some of upper half mile may be utilized.

GENERAL INFORMATION

SHELTER: Excellent shelter available at creek mouth. A narrow deep pass about 50' wide leads to bay at creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Creek easily surveyed along either bank.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Ruins of Neilson homestead on east shore of bay at creek mouth. Only remaining structure, a trapper's cabin.

I 287.9 CABIN CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1955	9/2	G	0.25	43	6		Good facilities, but small
1957	8/4	G	0.25				26 off mouth
	8/19	G	0.25	215	Few		
1958	8/18	G	0.25	28	0		
1959	9/6	A					No visibility
1962	7/30	G	2.0				No fish. Poor facilities after 0.25 mile

I 288.9 GRANITE CREEK (Iliamna Lake)

LOCATION: 59°25'12" N. 154°30'06" W.

PREVIOUS NAMES OR NUMBERS: B3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 19.5 miles

LENGTH ACCESSIBLE TO SALMON: Uncertain, 3.5 miles to first large lake

AVERAGE WIDTH: 30' RANGE: 10'-60'

AVERAGE DEPTH: 20" RANGE: 12"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 343,156 square yards (70.9 acres)

POTENTIAL SPAWNING AREA: <1%, 484 square yards (0.1 acre)

BOTTOM QUALITY: 10% 1/8"-3", 20% 3"-12", 70% >12". Spawning facilities limited to small scattered patches of gravel in lower 0.5 mile. Bottom apparently stable.

WATERSHED: 51 square miles. A narrow steep canyon cut through rolling hills. Cottonwood and spruce near mouth, alder, birch, and tundra after first mile. Evidence of considerable flooding and severe scouring. Source: numerous lakes along main stem.

GRADIENT: 49'/mile

WATER VELOCITY: 1.8 fps

FLOW: .75 cfs (July 31, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 18.5° C. (July 31, 1962)

WATER TEMPERATURE: 12.3° C. (July 31, 1962)

POOLS AND RIFFLES:

I 288.9 GRANITE CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 20-445

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: All spawning apparently in small patches of gravel in lower 0.5 mile.

GENERAL INFORMATION

SHELTER: Excellent shelter available in several places near mouth.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Creek wadable during normal flow. Foot survey difficult because of boulders.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, grayling.

WILDLIFE SPECIES:

REMARKS:

I 288.9 GRANITE CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1955 9/2	G 2.0	18	0		Spawning facilities virtually nil
1957 8/5	G 4.0				100 off mouth
8/19	G 0.75	445	0		Spawning in gravel patches and in deep pools
1958 8/18	G 0.5	83	0		Difficult going, high water
1961 9/6	A 0.1				No fish
1962 7/31	G 3.5				No fish, poor facilities

I 297.3 LAKE CREEK (Iliamna Lake)

LOCATION: 59°24'54" N. 154°35'30" W.

PREVIOUS NAMES OR NUMBERS: B2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1.5 miles

LENGTH ACCESSIBLE TO SALMON: 1.5 miles

AVERAGE WIDTH: 15' RANGE: 10'-25'

AVERAGE DEPTH: 12" RANGE: 6"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 13,068 square yards (2.7 acres)

POTENTIAL SPAWNING AREA: 50%, 6,776 square yards (1.4 acres)

BOTTOM QUALITY: 6% <1/8", 27% 1/8"-3", 47% 3"-12", 20% >12". Fair gravel in lower 0.5 mile, lower half of upper 0.5 mile.

WATERSHED: 12 square miles. Rolling hills covered with spruce forest. Lower 500 yards of creek flows through narrow rock canyon 30' deep. A small lake lies at upper end of canyon. Source: lake 1 mile beyond canyon, marshy area below source lake. A small falls at mouth. May be a partial block at certain water levels.

GRADIENT: 69'/mile

WATER VELOCITY: 1.7 fps

FLOW: 20 cfs (Aug. 1, 1962). Measured at head of canyon, normal summer flow. RANGE:

AIR TEMPERATURE: 18.0° C. (Aug. 30, 1962)

WATER TEMPERATURE: 12.2° C. (Aug. 30, 1962)

POOLS AND RIFFLES:

I 297.3 LAKE CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 100-5,000

TIME OF OCCUPANCY: Aug. 1-Sept. 15

PEAK OF SPAWNING: Aug. 20-Sept. 1

DISTRIBUTION OF SPAWNERS: Most spawning in second 0.5 mile of stream, some spawning in source lake inlet.

GENERAL INFORMATION

SHELTER: Depending on level of Iliamna Lake a small boat can be anchored next to east bank at creek mouth. Other shelter available 100 yards east of creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility good in sections of stream utilized. Creek wadeable during normal water levels.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, grayling.

WILDLIFE SPECIES: Brown bear, seagulls.

REMARKS:

I 297.3 LAKE CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1955 9/3	G 1.0	210	21		Good facilities
1956 8/20	A 1.5	500	0		
9/9	A 1.5	400	2,500		Visibility fair
1957 8/5	G 1.0				400 off mouth
8/19	G 1.0	865	0		
1958 8/18	G 1.0	304	0		Most spawning 0.5 mile section below source lake
1959 9/6	A 1.0	500	200		Peak well past
1960 8/20	G 1.5	5,067	7		
8/28	A 1.5	700	0		Most fish above first small lake
9/5	A 1.5	1,500	Many		
1961 8/14	A 1.0	100	0		
1962 8/1	G 1.5				A few schooled in lake at head of canyon
8/11	A 1.5	100	0		40 off mouth

I 303.4 NICK N. CREEK (Iliamna Lake)

LOCATION: 59°25'48" N. 154°37'48" W.

PREVIOUS NAMES OR NUMBERS: B1, Nick N. Fish Camp, Nick Fish Camp, Upper Fish Camp, Lower Fish Camp.

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 1.0 mile

LENGTH ACCESSIBLE TO SALMON: 1.0 mile

AVERAGE WIDTH: 15' RANGE:

AVERAGE DEPTH: 12" RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 8,712 square yards (1.8 acres)

POTENTIAL SPAWNING AREA: 40%, 3,388 square yards (0.7 acre)

BOTTOM QUALITY: Outlet of source lake nonspawnable because of rubble and boulders.

WATERSHED: 7 square miles. Rolling hills covered with spruce and birch forest. Source: a small lake 50 yards south of Iliamna Lake.

GRADIENT: 103'/mile

WATER VELOCITY: 1.5 fps

FLOW: 20 cfs (Aug. 2, 1962). Measured at outlet, normal summer flow. RANGE:

AIR TEMPERATURE: 18.0° C. (Aug. 2, 1962)

WATER TEMPERATURE: 11.3° C. (Aug. 2 1962)

POOLS AND RIFFLES:

I 303.4 NICK N.CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 50-500

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: All spawning in source lake inlet.

GENERAL INFORMATION

SHELTER: After July a small boat can get into creek mouth. Other protection, a small bay 0.5 mile east of creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility poor. Spawning area reached either by hiking southeast around source lake or by portaging a skiff to source lake and proceeding across lake.

PERSONAL-USE FISHERY: Annual personal-use fishery by one or two families.

FISH SPECIES: Rainbow, northern pike.

WILDLIFE SPECIES:

REMARKS: In 1962, a lodge and airstrip were under construction on the narrow strip of land separating source lake from Iliamna Lake.

I 303.4 NICK N. CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 9/5	A 1.0	Few	100		
1956 8/20	A 1.0				500 off mouth
1957 8/20	A 1.0	500	0		
1960 8/28	A 1.0				1,500 off mouth
1962 8/2					No fish yet
8/11	A 1.0	50	0		In inlet of source lake

I 318.2 CAMP CREEK (Iliamna Lake)

LOCATION: 59°25'06: N. 154°57'18" W.

PREVIOUS NAMES OR NUMBERS: A3

U.S.G.S. MAP: Iliamna, 1:250,000-Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.6 miles

LENGTH ACCESSIBLE TO SALMON: 5.6 miles

AVERAGE WIDTH: 12' RANGE: 6'-20'

AVERAGE DEPTH: 8" RANGE 5"-18"

TOTAL ACCESSIBLE SPAWNING AREA: 39,688 square yards (8.2 acres)

POTENTIAL SPAWNING AREA: 40%, 15,972 square yards (3.3 acres)

BOTTOM QUALITY: 50% 1/8"-3", 40% 3"-12", 10% >12". Fair spawning gravel, some boulder and bedrock, stable.

WATERSHED: 9 square miles. Creek emerges from short canyon 0.7 mile above mouth; above canyon a broad valley and tundra-covered hills; birch, alder, and willow thickets along stream. Source: several small lakes and marshes.

GRADIENT: 23'/mile

WATER VELOCITY: 1.8 fps

FLOW: 14 cfs (July 18, 1962). Measured just above short outlet slough, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (July 18, 1962)

WATER TEMPERATURE: 16.5° C. (July 18, 1962)

POOLS AND RIFFLES:

I 318.2 CAMP CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 25-2,500

TIME OF OCCUPANCY: July 25-Sept. 1

PEAK OF SPAWNING: Aug. 10-Sept. 20

DISTRIBUTION OF SPAWNERS: Uncertain, fish utilize lower 3 miles.

GENERAL INFORMATION

SHELTER: No shelter at creek. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility poor. High ground west of creek best for upstream travel. Easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 318.2 CAMP CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1955 8/30	G 3.0	22	3		Good gravel
1957 8/3	G 1.0	2,378	Few		Just beginning to spawn
1962 7/18	G 0.5				A few schooled at mouth
8/11	A 5.6				A few fish in lower 2 miles, 100 off mouth

I 320.8 DENNIS CREEK (Iliamna Lake)

LOCATION: 59°24'24" N. 155°01'00" W.

PREVIOUS NAMES OR NUMBERS: A2

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 19.3 miles

LENGTH ACCESSIBLE TO SALMON: 19.3 miles

AVERAGE WIDTH: 30' RANGE: 10'-50'

AVERAGE DEPTH: 12" RANGE: 8"-36"

TOTAL ACCESSIBLE SPAWNING AREA: 339,768 square yards (70.2 acres)

POTENTIAL SPAWNING AREA: 26%, 88,572 square yards (18.3 acres)

BOTTOM QUALITY: 20% 1/8"-3", 40% 3"-12", 40% >12". Good gravel in lower 2 miles, much rubble and bedrock in canyon, upper part not well known. Bottom stable.

WATERSHED: 46 square miles. Creek emerges from a canyon 1.5 miles long. 1 mile from mouth, above canyon a broad valley and open rolling hills. Willow, birch, and cottonwood along stream. Source: numerous lakes and marshes.

GRADIENT: 58'/mile

WATER VELOCITY: 2.0 fps

FLOW: 50 cfs (July 18, 1962). Measured 1 mile from mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 20.0° C. (July 18, 1962)

WATER TEMPERATURE: 13.5° C. (July 18, 1962)

POOLS AND RIFFLES:

I 320.8 | DENNIS CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 94-3,800

TIME OF OCCUPANCY: Aug. 1-Sept. 10

PEAK OF SPAWNING: Aug. 20-Sept. 1

DISTRIBUTION OF SPAWNERS: Lower mile heavily spawned. Apparently considerable spawning above canyon, but extent unknown.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for small boats. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility obscured by brush in lower spawning area. Creek wadeable during normal flow.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES: Brown bear, seagulls.

REMARKS: Two creek outlets about 500 yards apart in 1961 and 1962, main outlet about 50' wide.

I 320.8 DENNIS CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 9/11	A 20.0				No count
1955 8/29	G 1.0	88	6		
1957 8/3	G 0.7	3,800	0		Fish apparently moving upstream
1958 9/8	G 0.1	Few	Few		Dead very old
1959 8/2	G 0.3				310 off mouth
1960 8/8	A 3.0				No estimate, fish in lower mile
1961 8/14	A 20.0	100	0		All fish in lower mile
1962 8/11	A 6.0	1,500	100		

I 337.4 BELINDA CREEK (Iliamna Lake)

LOCATION: 59°22'18" N. 155°21'30" W.

PREVIOUS NAMES OR NUMBERS: A1

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 24.9 miles

LENGTH ACCESSIBLE TO SALMON: 24.9 miles

AVERAGE WIDTH: 35' RANGE: 20'-60'

AVERAGE DEPTH: 18" RANGE: 12"-48"

TOTAL ACCESSIBLE SPAWNING AREA: 511,588 square yards (105.7 acres)

POTENTIAL SPAWNING AREA: 35%, 179,080 square yards (37.0 acres)

BOTTOM QUALITY: 1% <1/8", 18% 1/8"-3", 66% 3"-12", 15% >12". Good gravel in lower 2 miles, poor in canyon, fair gravel above canyon, but extent uncertain. Bottom stable.

WATERSHED: 100 square miles. Creek emerges from a canyon 2 miles from mouth, above canyon a broad valley and open rolling hills. Willow, birch, and cottonwood along stream. Source: numerous lakes and marshes.

GRADIENT: 44'/mile

WATER VELOCITY: 1.7 fps

FLOW: 70 cfs (July 17, 1962). Measured 100 yards above outlet slough, normal summer flow. RANGE:

AIR TEMPERATURE: 15.0° C. (July 17, 1962)

WATER TEMPERATURE: 12.0° C. (July 17, 1962)

POOLS AND RIFFLES:

I 337.4 BELINDA CREEK (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: <100-3,000

TIME OF OCCUPANCY: July 15-Sept. 10

PEAK OF SPAWNING: Aug. 10-20

DISTRIBUTION OF SPAWNERS: Most spawning in lower 2 miles where several side channels also are utilized. Spawners observed 8-10 miles above mouth in 1962.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for vessels up to 3' draft provided that bar at mouth open. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility partially obscured by overhanging trees in lower miles. Wadable during normal flows.

PERSONAL-USE FISHERY: Native fishery present from 1921-1929. Sporadic in recent years.

FISH SPECIES: Kings, chums, Dolly Varden, grayling, rainbow, northern pike.

WILDLIFE SPECIES: Brown bear, moose, seagulls.

REMARKS: A quonset hut stands at mouth. A road connects mouth to nearby Big Mountain, location of a White Owl Station (Alaska Communications System).

I 337.4

BELINDA CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1921		G				25,000	
1922		G					Run equal to 1921
1923						20,000	No direct reference to survey, 2,000 reds in 1924 10% of run
1924	8/9	G	4.0			2,000	Most spawning in lower mile, beach spawning each side of creek mouth
1925		G				Few	Native fishery took 4,000 reds, most of run
1926		G				Few	Natives took 5,200 reds, most of run
1927	8/7	G					Natives took 4,500, fair escapement
1928	8/10	G				Few	Natives took 3,000 reds
1929	8/12	G				6,000	Fish village washed out by spring floods
1930	8/25	G		252	500		
1937	8/9	G	0.5			30,000	
1938		G					Heavily populated
1947	11/9	A	25.0			Few	Run apparently over
1955	8/29	G	1.0	43	16		Lower 0.8 mile best spawning area
1956	7/8	A	0.1	5,500	0		
	7/15	G	0.3				Several thousand off mouth

I 337.4 BELINDA CREEK (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1956 8/24	G 0.3	1,160			No spawning, fish moving
9/1	G 0.5	232	154		
1957 7/30	G 1.0	3,600	Few		
8/12	G 1.5	1,750	Few		
9/9	G 0.5	Few	Few		
1959 8/1	G 0.5	50	0		Some schooled in outlet slough
9/7	G 0.1	0	Few		
1960 10/5	A 0.5	0	0		
1961 8/14	A 1.0	0	0		Visibility poor
8/23	G 1.7	32	1		Fish just above slough
1962 8/11	A 20.0	3,100	100		50 off mouth

G 0.0 | GIBRALTAR CREEK (Gibraltar Lake)

LOCATION: 59°23'12" N. 154°57'12" W.

PREVIOUS NAMES OR NUMBERS: A4, Kakhonak Creek

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.8 miles

LENGTH ACCESSIBLE TO SALMON: 5.8 miles

AVERAGE WIDTH: 95' RANGE: 60'-100'

AVERAGE DEPTH: 24" RANGE: 18"-48"

TOTAL ACCESSIBLE SPAWNING AREA: 322,344 square yards (66.6 acres)

POTENTIAL SPAWNING AREA: 60%, 193,600 square yards (40.0 acres)

BOTTOM QUALITY: 2% <1/8", 52% 1/8"-3", 33% 3"-12", 13% >12". Excellent gravel in lower 4 miles and upper 0.5 mile. Much rubble and boulder above 4 miles to within 0.5 mile of Gibraltar Lake. Bottom stable.

WATERSHED: 128 square miles. Creek flows through a narrow cut about 50' below surrounding terrain for its entire length. Willow, alder, and birch thickets along stream. Subject to occasional flooding. Source: Gibraltar Lake.

GRADIENT: 23'/mile

WATER VELOCITY: 2.0 fps

FLOW: 235 cfs (Sept. 8, 1961). Measured 0.2 mile below Gibraltar Lake, normal summer flow. RANGE:

AIR TEMPERATURE: 4.0° C. (Sept. 8, 1961)

WATER TEMPERATURE: 10.0° C. (Sept. 8, 1961)

POOLS AND RIFFLES:

G 0.0 GIBRALTAR CREEK (Gibraltar Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 5-9% (1960)

ESCAPEMENT RANGE: <500-250,000

TIME OF OCCUPANCY: July 20-Sept. 30

PEAK OF SPAWNING: Aug. 15-Sept. 15

DISTRIBUTION OF SPAWNERS: Distribution dependent on abundance. In years of large abundance spawning occurs throughout stream, in small years in lower 2 and upper 0.5 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter available in outlet slough for boats up to 2.5' draft. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good. Creek wadeable during normal water levels. Foot survey difficult because of size, possible to use skiff in lower 2 miles.

PERSONAL-USE FISHERY: A heavy annual personal-use fishery, may take over half of run in poor years.

FISH SPECIES: Dolly Varden, rainbow, occasional kings, chums, and pinks.

WILDLIFE SPECIES: Brown bear.

REMARKS: A fish camp at creek mouth. Kakhonak village located 3 miles east of creek, population about 50. A village west of creek abandoned in 1930, no structures remain.

G 0.0 GIBRALTAR CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1920	Aug.	G	5.8				Good run, stream well seeded
1921		G	5.8			250,000	No fish enter lake
1922		G					Heavy loss of eggs due to overspawning
1923		G				200,000	Kakhonak only creek considered to contain sufficient seeding for normal results
1924	7/18	G	0.1				Good numbers schooled off mouth, few fish in stream
	8/10	G	4.0			175,000	Fair numbers schooled in lower river
1925		G				15,000	Fish small
1926	Sept.	G	5.8			250,000	Fish large
1927	8/10	G	5.8			75,000	Mostly schooled, little spawning
1928	8/10	G	5.8			75,000	
1929	8/13	G	5.8			125,000	75,000 off mouth, 50,000 in stream
1930	8/27	G	3.0	3,800	400		
1931	8/21	A	1.0				Good escapement to one mile
1937							Natives report good run
1938							Heavily populated
1947	9/11	A	5.8				Spawning everywhere
	9/11	G					Measured ♂ 49, ♀ 61

G 0.0 GIBRALTAR CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1948	9/8	G	0.1				Measured ♂ 102, ♀ 100; scales ♂ 30
1949	9/7	A	1.5	0	10		Few fish on native racks
1950	9/5	G					Measured ♂ 98, ♂ 118; scales ♂ 40
1951	9/20	A	5.8	Few	Few		Spawn-outs in fair shape, dead fairly fresh
1952	9/11	A,G	5.8				Literally jammed with fish. Measured ♂ 102, ♀ 105; scales ♂ 40
1953	9/3	A	5.8			5,000	1/50th of last year's run
	9/6	A	5.8			3,000	
	9/7	G	0.1				Measured ♂ 62, ♀ 239; scales ♂ 40
1954	9/7	A	5.8			500	
1955	9/1	G	1.5	327	7		Poor visibility
1956	8/20	A	5.8			72,000	
	9/6	A	5.8			200,000	Run extremely heavy
	9/9	A	5.8	180,000	10,000		
	9/11	G	0.1				Measured ♂ 263, ♀ 274
1957	8/4	G	1.5	553	0		
	8/20	A	5.8			30,000	River high, turbid. 8,000 off mouth

G 0.0 GIBRALTAR CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1958	8/19	G 2.0	2,900			High and turbid
	9/4	A 5.8	2,000			
	9/8	G 3.0	2,980			Measured ♂ 183, ♀ 402; scales ♂ 60, ♀ 60
1959	8/22	G 3.0	2,980	0		No fish above 2.5 miles
	9/5	A 5.8	2,500	0		All fish in lower miles
1960	8/22	G 4.0	86,400	400		More than 10,000 off mouth
	8/28	A 5.8	147,000	Few		About 250,000 off mouth and in slough
	9/5	A 5.8	150,000	25,000		22,000 off mouth
	9/16	A 5.8	Few	50,000		
	9/23	A 5.8	1,000	9,000		
1961	8/14	A 5.8	113,000			Mostly schooled
	8/24	G 2.0	16,370	324		Well distributed
	9/2	A 5.8	18,000			
	9/8	G 5.8	10,350	5,742		90% in lower 4 miles. Measured ♂ 67, ♀ 70; scales ♂ 20, ♀ 20
	9/13	A 5.8	2,000	5,000		Live at outlet Gibraltar Lake and lower 2 miles, 90% of dead in lower river
1962	8/11	A 5.8	13,200	0		4,000 off mouth
	9/3	A 5.8	49,400	4,200		Peak of spawning
	9/8	G 1.0				Measured ♂ 200, ♀ 200; scales ♂ 100, ♀ 100; otoliths ♂ 50, ♀ 50
	9/27	A 5.8	3,000			Thousands dead, spawning over

G 0.0:0.5L LITTLE GIBRALTAR CREEK (Gibraltar Creek)

LOCATION: 59°23'24" N. 154°57'12" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 14.9 miles

LENGTH ACCESSIBLE TO SALMON: 14.9 miles

AVERAGE WIDTH: 10' RANGE: 6'-20'

AVERAGE DEPTH: 18" RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 87,604 square yards (18.1 acres)

POTENTIAL SPAWNING AREA: 45%, 39,204 square yards (8.1 acres)

BOTTOM QUALITY: 23% <1/8", 28% 1/8"-3", 32% 3"-12", 17% >12". Good gravel in lower mile, not well known above 1 mile. Bottom fairly stable.

WATERSHED: 65 square miles. A shallow stream-cut valley through open rolling hills, willow thickets near mouth, tundra in upper part. Subject to occasional flood. Source: several small lakes and marshes.

GRADIENT: 104'/mile

WATER VELOCITY: 2.0 fps

FLOW: 20 cfs (Aug. 6, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 22.0° C. (Aug. 6, 1962)

WATER TEMPERATURE: 11.0° C. (Aug. 6, 1962)

POOLS AND RIFFLES:

C 0.0:C.5L LITTLE GIBRALTAR CREEK (Gibraltar Creek)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: Aug. 1-Sept. 10

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Uncertain, fish observed to 9 miles.

GENERAL INFORMATION

SHELTER: See Gibraltar Creek.

SURVEY ROUTES AND METHODS: Aerial visibility good. Creek easily waded.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Prior to 1961, Little Gibraltar Creek and Trout Creek considered same stream. U.S.G.S. Map Iliamna, 1:250,000, erroneous; Iliamna B-5, 1:63,360, shows true location.

G 0.0:0.5L LITTLE GIBRALTAR CREEK (Gibraltar Creek)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1962 8/6	G 1.5	390	0		Fish migrating
8/11	A 10.0	2,700	50		Fish in upper 9 miles
9/3	A 3.0	600	500		Peak 2 weeks past

G 9.9 DREAM CREEK (Gibraltar Lake)

LOCATION: 59°32'12" N. 154°57'12" W.

PREVIOUS NAMES OR NUMBERS: A4c

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.4 miles

LENGTH ACCESSIBLE TO SALMON: 4.4 miles

AVERAGE WIDTH: 15' RANGE: 6'-30'

AVERAGE DEPTH: 12" RANGE: 8"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 38,720 square yards (8.0 acres)

POTENTIAL SPAWNING AREA: 42%, 16,456 square yards (3.4 acres)

BOTTOM QUALITY: 14% <1/8", 24% 1/8"-3", 36% 3"-12", 26% >12". Excellent gravel in lower 0.5 mile, fair gravel beyond. Bottom fairly stable.

WATERSHED: 20 square miles. A glacial valley through open rolling hills, cottonwood, alder, and birch thickets along stream. Lies in same major valley as Southeast Creek. Source: several small lakes.

GRADIENT: 62'/mile

WATER VELOCITY: 2.0 fps

FLOW: 24 cfs (Aug. 4, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 20.5° C. (Aug. 4, 1962)

WATER TEMPERATURE: 15.0° C. (Aug. 4, 1962)

POOLS AND RIFFLES:

G 9.9 DREAM CREEK (Gibraltar Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 300-14,000

TIME OF OCCUPANCY: Aug. 1-Sept. 15

PEAK OF SPAWNING: Sept. 1-10

DISTRIBUTION OF SPAWNERS: Spawning apparently throughout, lower 2 miles most heavily utilized.

GENERAL INFORMATION

SHELTER: Good shelter in stream mouth for fold boat or other airplane portable boat.

SURVEY ROUTES AND METHODS: Aerial visibility fair, may be turbulent. Creek easily waded above outlet slough.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow.

WILDLIFE SPECIES:

REMARKS:

G 9.9 DREAM CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 9/11	G 0.1				Measured ♂ 44, ♀ 61
1952 9/11	A				Fair number
1954 9/5	A	0	0		
1956 8/20	A 1.0	2,500	0		
1957 6/29	G 0.5				Red fry observed
8/20	A 0.1				Fish present, no estimate
1959 9/5	A 1.0	300	0		Fish in lower mile
1960 9/5	A 4.4	9,000	5,000		Heavily spawned
1961 9/2	A 4.4	500	0		Just beginning to spawn
1962 8/4	G 2.5	4,160	0		Fish migrating, no spawning
8/11	A 4.0	1,920	0		2,000 off mouth

G 10.0 SOUTHEAST CREEK (Gibraltar Lake)

LOCATION: 59°19'54" N. 154°36'36" W.

PREVIOUS NAMES OR NUMBERS: A4b

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.1 miles

LENGTH ACCESSIBLE TO SALMON: 5.1 miles

AVERAGE WIDTH: 20' RANGE: 6'-20'

AVERAGE DEPTH: 12" RANGE: 6"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 60,016 square yards (12.4 acres)

POTENTIAL SPAWNING AREA: 36%, 21,780 square yards (4.5 acres)

BOTTOM QUALITY: 27% <1/8", 27% 1/8"-3", 30% 3"-12", 16% >12". Good gravel in lower 3 miles, not known beyond 3 miles. Bottom fairly stable.

WATERSHED: 14 square miles. A glacial valley through open rolling hills, cottonwood, alder, and birch along stream. Source: several small lakes.

GRADIENT: 338'/mile

WATER VELOCITY: 2.0 fps

FLOW: 32 cfs (Aug. 5, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 23.0° C. (Aug. 5, 1962)

WATER TEMPERATURE: 11.0° C. (Aug. 5, 1962)

POOLS AND RIFFLES:

G 10.0 SOUTHEAST CREEK (Gibraltar Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1962)

ESCAPEMENT RANGE: 150-5,270

TIME OF OCCUPANCY: July 25-Sept. 30

PEAK OF SPAWNING: Aug. 25-Sept. 10

DISTRIBUTION OF SPAWNERS: Most spawning in lower 3 miles.

GENERAL INFORMATION

SHELTER: Excellent shelter in outlet for fold boat or other airplane portable boat. Mouth exposed to all but easterly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good, may be turbulent. Creek wadable.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow.

WILDLIFE SPECIES:

REMARKS:

G 10.0 SOUTHEAST CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 8/20	A 0.1				Fish present
1959 9/5	A 3.0			2,500	No fish above 3 miles
1960 9/5	A 5.0	500	1,500		Fish in lower mile only
1961 9/2	A 5.1	150	0		Schooled at mouth
1962 8/5	G 2.5	4,850	420		
8/11	A 1.0	3,350			1,200 off mouth

G 18.2 TROUT CREEK (Gibraltar Lake)

LOCATION: 59°22'54" N. 154°47'00" W.

PREVIOUS NAMES OR NUMBERS: A4a

U.S.G.S. MAP: Iliamna, 1:250,000; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

TOTAL LENGTH: 6.1 miles

LENGTH ACCESSIBLE TO SALMON: 6.1 miles

AVERAGE WIDTH: 12' RANGE: 10'-15'

AVERAGE DEPTH: 12" RANGE: 8"-30"

TOTAL ACCESSIBLE SPAWNING AREA: 43,076 square yards (8.9 acres)

POTENTIAL SPAWNING AREA: 10%, 4,356 square yards (0.9 acre)

BOTTOM QUALITY: 10% <1/8", 20% 1/8"-3", 30% 3"-12". Good gravel in lower 0.5 mile, much large rock beyond. Bottom unstable.

WATERSHED: 33 square miles. A glacial valley through open rolling hills, dense willow, alder, and birch thickets along stream. Subject to occasional flood. Source: Emerald Lake.

GRADIENT: 86'/mile

WATER VELOCITY: 2.0 fps

FLOW: 20 cfs (Aug. 6, 1962). Measured just above mouth, normal summer flow. RANGE:

AIR TEMPERATURE: 22.0° C. (Aug. 6, 1962)

WATER TEMPERATURE: 11.0° C. (Aug. 6, 1962)

POOLS AND RIFFLES:

G 18.2 TROUT CREEK (Gibraltar Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: Aug. 20-Sept. 20

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Good shelter in creek mouth for fold boat or other airplane portable boat.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Creek easily waded at normal water level.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Prior to 1961 Trout Creek mistaken for Little Gibraltar Creek. U.S.G.S. Map Iliamna, 1:250,000, erroneous; Iliamna B-5, 1:63,360, shows true location.

G 18.2 | TROUT CREEK (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1921		G					Great hordes
1957	7/30	G	0.5				Good gravel, temperature warmer than Gibraltar Creek
1961	9/13	A	0.5				4,000 off mouth
1962	8/6	G	1.0	0	0		
	8/11	A	2.0	0	0		

C 0.0 NEWHALEN RIVER (Lake Clark)

LOCATION: 59°41'43" N 154°52'52" W.

PREVIOUS NAMES OR NUMBERS: H1

U.S.G.S. MAP: Iliamna, 1:250,000; Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 25.0 miles

LENGTH ACCESSIBLE TO SALMON: 25.0 miles

AVERAGE WIDTH: 250' RANGE: 180'-500'

AVERAGE DEPTH: 12' RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 3,667,268 square yards (757.7 acres)

POTENTIAL SPAWNING AREA: 40%, 1,467,000 square yards (303.1 acres)

BOTTOM QUALITY:

WATERSHED: 3,700 square miles. A broad glacial valley between Iliamna Lake and Lake Clark. Surrounding terrain sparsely forested with spruce and birch. Three rapids in lower river present partial block at most water levels. Source: Six-Mile Lake and Lake Clark.

GRADIENT: 7'/mile

WATER VELOCITY: Approximately 2 fps

FLOW: 8,000-11,000 cfs, mean annual discharge (U.S.G.S.). RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

C 0.0 NEWHALEN RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 5-9%

ESCAPEMENT RANGE: To 300,000 or more

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 5-25

DISTRIBUTION OF SPAWNERS: Heaviest spawning apparently in lower 2 miles and upper 0.5 mile.

GENERAL INFORMATION

SHELTER: Excellent shelter available for any vessel in lower 2 miles.

SURVEY ROUTES AND METHODS: Aerial visibility nil because of glacial debris.

PERSONAL-USE FISHERY: A heavy annual personal-use fishery at mouth.

FISH SPECIES: Dolly Varden, rainbow, grayling, lake trout, king salmon, chum salmon.

WILDLIFE SPECIES:

REMARKS: Newhalen village located at mouth. The Newhalen River properly originates at Six-Mile Lake, apparently no more than a flooded sand flat. Six-Mile Lake and Lake Clark are connected by a channel 0.75 mile long and 200-300' wide. For purposes of the catalog the Newhalen River is considered to originate at Lake Clark.

C 0.0 NEWHALEN RIVER (Lake Clark)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1920	Sept.	G				Fish present
1921		G 25.0				Fish along entire length
1922		G 25.0				Fish spawning along entire length
1923		G 25.0				Turbid, 1/10 of last year's run
1924		G 25.0				Spawning along entire length
1925		G 25.0				Native fishery took 10,000 fish
1926	8/25	G 2.0				Heavy run
1927	8/13	G 2.0				75% of last years run
1928	8/13	G 2.0				Better than last year
1929	8/17	G 2.0				Five times run of last year
1930	9/8	A 25.0	2,500	0		Fish entering river yet
1931	9/3	G 8.0				Large run, biggest yet at Nondalton
1937	8/18	G				Fish jumping, several schools observed
1955	9/13	A 25.0	6,078	0		Visibility not too bad in lower 1/3
1956	9/9	A 25.0	8,000	Few		Visibility poor
	9/28	A 25.0	3,000	20,000		Visibility fair

C 0.0 NEWHALEN RIVER (Lake Clark)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 9/22	G 3.0			Many	Measured ♂ 135, ♀ 40; scales ♂ 224, ♀ 40
1958 9/27	G			Many	Measured ♂ 404, ♀ 80; scales ♂ 80, ♀ 80
1959 9/20	A 25.0				No fish visible
1960 9/12	A 25.0	2,500	0		Visibility poor
10/10	A 25.0	Few	300,000		Visibility poor
1961 9/18	G 0.5				Measured ♂ 4, ♀ 4; scales ♂ 25, ♀ 25
1962 9/25	G 0.5				Measured ♂ 174, ♀ 190; scales ♂ 120, ♀ 106; otoliths ♂ 50, ♀ 50
9/27	A 25.0	150	16,268		Turbid

C 0.0:18.7L LITTLE BEAR CREEK AND POND (Newhalen River)

LOCATION: 59°49'30" N. 154°53'36" W.

PREVIOUS NAMES OR NUMBERS: Hla

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 6.0 miles

LENGTH ACCESSIBLE TO SALMON: 0.7 mile

AVERAGE WIDTH: 7' RANGE: 5'-10'

AVERAGE DEPTH: 6" RANGE: 4"-12"

TOTAL ACCESSIBLE SPAWNING AREA: 2,904 square yards (0.6 acre)

POTENTIAL SPAWNING AREA: 60%, 1,936 square yards (0.4 acre)

BOTTOM QUALITY: 12% <1/8", 77% 1/8"-3", 11% 3"-12". Good gravel in pond and in creek just below pond. Bottom stable.

WATERSHED: 4 square miles. A shallow stream-cut valley through open rolling hills sparsely forested with spruce and birch. Source: springs and surface runoff.

GRADIENT:

WATER VELOCITY: 0.2 fps

FLOW: 5 cfs (Sept. 18, 1961). Measured at mouth, water level receding. RANGE:

AIR TEMPERATURE: 11.0° C. (Sept. 18, 1961)

WATER TEMPERATURE: 8.0° C. (Sept. 18, 1961)

POOLS AND RIFFLES:

C 0.0:18.7L LITTLE BEAR CREEK AND POND (Newhalen River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 0-750

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 1-30

DISTRIBUTION OF SPAWNERS: Most spawning in spring pond, some sections of stream utilized.

GENERAL INFORMATION

SHELTER: Boat not required.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Portage road crosses creek near mouth.

PERSONAL-USE FISHERY: In some years entire run taken, other years none.

FISH SPECIES: Rainbow.

WILDLIFE SPECIES:

REMARKS:

C 0.0:18.7L LITTLE BEAR CREEK AND POND (Newhalen River)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 9/19	A 0.7	500	0		
9/28	G 0.7	120	2		
1958 8/28	A 0.7	100	0		
1959 9/6	A 0.7				No fish
1960 9/12	A 0.7	750	0		
1961 8/30	A 0.7	Few	0		

C 0.0:15.1L ALEXI CREEK (Newhalen River)

LOCATION: 59°51'54" N. 154°51'06" W.

PREVIOUS NAMES OR NUMBERS: H1b

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.0 miles

LENGTH ACCESSIBLE TO SALMON: 4.0 miles

AVERAGE WIDTH: 36' RANGE: 24'-40'

AVERAGE DEPTH: 15" RANGE: 12"-24"

TOTAL ACCESSIBLE SPAWNING AREA: 84,700 square yards (17.5 acres)

POTENTIAL SPAWNING AREA: 70%, 59,532 square yards (12.3 acres)

BOTTOM QUALITY: 11% <1/8", 70% 1/8"-3", 19% 3"-12". Good gravel in lower 3 miles, fair gravel in upper mile. Bottom fairly stable.

WATERSHED: 18 square miles. A shallow stream-cut valley through rolling hills sparsely forested with spruce, thick willow brush along stream. Source: Alexi Lake.

GRADIENT:

WATER VELOCITY: 4.0 fps

FLOW: 100 cfs (Sept. 10, 1961). Measured just below Alexi Lake, creek near flood stage. RANGE:

AIR TEMPERATURE: 13.0° C. (Sept. 10, 1961)

WATER TEMPERATURE: 11.0° C. (Sept. 10, 1961)

POOLS AND RIFFLES:

C 0.0:15.1L ALEXI CREEK (Newhalen River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 0-36,000

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 5-20

DISTRIBUTION OF SPAWNERS: Spawning at outlet and in Alexi Lake inlet. Beach spawning on east shore Alexi Lake.

GENERAL INFORMATION

SHELTER: Not required.

SURVEY ROUTES AND METHODS: Aerial visibility good. Creek wadable during normal flow.

PERSONAL-USE FISHERY: Annual personal-use fishery at mouth.

FISH SPECIES: Rainbow.

WILDLIFE SPECIES:

REMARKS: Alexi Lake inlet and beaches have yet to be surveyed. Creek mouth is 200 yards north of portage road landing.

C 0.0:15.1L ALEXI LAKE (Newhalen River)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1921	G				Early in season fish passed upstream to lake
1952 9/10	A 4.0				Moderate numbers
1955 10/8	G 0.1				No fish
1956 9/9	A 4.0	200	0		30 in lake
1957 9/25	A 4.0	0	1,000		
1959 9/6	A 4.0				No fish
1960 9/12	A 4.0			2,000	36,000 in lake
1961 8/30	A 4.0	200	0		Most fish schooled in lake
9/10	G 4.0	19	77		Spawning in lake outlet only
1962 9/3	A 4.0	1,300	0		

C 0.0:6.0L TAZIMINA RIVER (Newhalen River)

LOCATION: 59°57'24" N. 154°50'12" W.

PREVIOUS NAMES OR NUMBERS: H2

U.S.G.S. MAP: Iliamna, Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 54.0 miles

LENGTH ACCESSIBLE TO SALMON: 9.0 miles

AVERAGE WIDTH: 150' RANGE: 105'-165'

AVERAGE DEPTH: 24" RANGE: 18"-48"

TOTAL ACCESSIBLE SPAWNING AREA: 792,308 square yards (163.7 acres)

POTENTIAL SPAWNING AREA: 22%, 174,240 square yards (36.0 acres)

BOTTOM QUALITY: 23% <1/8", 23% 1/8"-3", 30% 3"-12", 24% >12". Fair gravel in lower 5 miles, much rock above 5 miles. Water velocities exceeding 5 fps prohibit spawning in many places.

WATERSHED: 350 square miles. Lower 10 miles a stream-cut valley, upper part a glacial valley. Surrounding terrain forested with spruce. Dense alder, willow, and cottonwood along stream. A 72' falls 9 miles from mouth a total block to salmon. Source: lower and upper Tazimina Lakes.

GRADIENT: 18'/mile below falls

WATER VELOCITY: 6.0 fps

FLOW: 1,400 cfs (Sept. 10, 1962). RANGE:
Normal summer flow.

AIR TEMPERATURE: 18.0° C. (Sept. 10, 1962)

WATER TEMPERATURE: 12.5° C. (Sept. 10, 1962)

POOLS AND RIFFLES:

C 0.0:6.0L TAZIMINA RIVER (Newhalen River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 10% or more

ESCAPEMENT RANGE: 50-500,000

TIME OF OCCUPANCY: July-Sept. 15

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: Most spawning in lower 5 miles where several side channels also are utilized. Spawning occurs to falls in years of large abundance.

GENERAL INFORMATION

SHELTER: Excellent shelter available in creek mouth.

SURVEY ROUTES AND METHODS: Aerial visibility good. Usually not wadable. A skiff can be taken to within 0.5 mile of falls.

PERSONAL-USE FISHERY: A personal-use fishery most years.

FISH SPECIES: Dolly Varden, grayling, lake trout, rainbow.

WILDLIFE SPECIES:

REMARKS: Empties into Six-Mile Lake opposite Nondalton.

C 0.0:6.0L TAZIMINA RIVER (Newhalen River)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1920	Sept.	G	9.0			50	
1921		G	9.0			Few	Fish from 3 miles to falls
1922		G	9.0			Many	Fish entire length, thousands coming in
1924		G	5.0			40,000	Fewer fish than in past 5 years except 1920
1925		G					Natives took 960, most of run
1938		G	9.0				Thousands
1940	7/25	A	9.0			500,000	Possibility of overseeding
1947	10/15	A	9.0	0	0		
1948	9/9	A,G	9.0				Apparently a heavy run. Measured ♂ 100, ♀ 101
1949		A	3.0	6,000	6,000		
		G					Measured ♂ 4, ♀ 11; scales ♂ 7
1950	9/4	A	3.0				Small numbers of fish
	9/4	G					Measured ♂ 69, ♀ 40
1951	9/20	A	4.0				No fish
1952	9/10	A	9.0				A good run, live spawned out
	9/10	G					Measured ♂ 114, ♀ 98; scales ♂ 114, ♀ 98

C 0.0:6.0L TAZIMINA RIVER (Newhalen River)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1953 9/3	A 9.0	1	0		River high, more fish probably present
1954 9/6	A 6.0	1,000	0		
1955 9/13	A 9.0	50	0		
10/6	A 9.0	0	0		
1956 9/9	A 7.0	27,000	5,000		Peak of spawning. Measured ♂ 53, ♀ 95
9/9	G				Measured ♂ 53, ♀ 95
9/28	A 7.0	0	Few		
1957 9/6	A 2.0	10,000	0		
9/6	G				Measured ♂ 17, ♀ 139; scales ♂ 17, ♀ 60
1958 8/28	A 9.0	600			All fish in lower 4-5 miles
1959 9/6	A 9.0	0	0		
9/16	A 6.0	150	0		Spawning in a side channel
1960 8/28	A 9.0	55,000	0		Spawning mainly near mouth
9/12	A 9.0	17,000	6,000		
1961 8/30	A 9.0	30,000	0		
9/8	G 3.3	1,000	150		Measured ♂ 19, ♀ 19; scales ♂ 19, ♀ 19
1962 9/10	G 9.0	3,500	120		
9.27	A 9.0	12	500		Spawning over

C 45.2 CHULITNA RIVER (Lake Clark)

LOCATION: 60°11'42" N. 154°39'00" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 16.0 miles

LENGTH ACCESSIBLE TO SALMON: 16.0 miles

AVERAGE WIDTH: 50' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 469,480 square yards (97.0 acres)

POTENTIAL SPAWNING AREA: 19%, 88,088 square yards (18.2 acres)

BOTTOM QUALITY: Poor spawning facilities, mostly silt. One 3-mile section appeared about 50% spawnable.

WATERSHED:

GRADIENT:

WATER VELOCITY: 1.5-2.0 fps in spawnable section

FLOW: RANGE:

AIR TEMPERATURE: 15.0° C. (July 14, 1962)

WATER TEMPERATURE: 13.0° C. (July 14, 1962)

POOLS AND RIFFLES:

C 45.2 CHULITNA RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Never observed or reported to have red salmon.

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat available at river mouth.

SURVEY ROUTES AND METHODS: Aerial visibility nil because of brown water. Navigable by skiff for many miles.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

C 68.6 KIJIK RIVER (Lake Clark)

LOCATION: 60°17'48" N. 154°13'06" W.

PREVIOUS NAMES OR NUMBERS: L1

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 18.0 miles

LENGTH ACCESSIBLE TO SALMON: 18.0 miles

AVERAGE WIDTH: 80' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 845,064 square yards (174.6 acres)

POTENTIAL SPAWNING AREA: 10%, 84,700 square yards (17.5 acres)

BOTTOM QUALITY: 20% <1/8", 60% 1/8"-3", 10% 3"-12", 10% >12". Poor spawning facilities due to unstable bottom.

WATERSHED: 291 square miles. A deep glacial valley heavily forested with spruce and birch. Stream very precipitous except in lower 3-4 miles. Subject to occasional severe flooding. Source: Lachabuna (Ingersol) Lake, glacial.

GRADIENT: 43'/mile

WATER VELOCITY: 2.0 fps

FLOW: 300-500 cfs mean annual discharge RANGE:

AIR TEMPERATURE: 14.0° C. (July 14, 1962)

WATER TEMPERATURE: 9.0° C. (July 14, 1962)

POOLS AND RIFFLES:

C 68.6 KIJIK RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 1-4% (1960)

ESCAPEMENT RANGE: 3,200-41,000

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Spawning to confluence of Little Kijik River, any spawning above not observed because of glacial water.

GENERAL INFORMATION

SHELTER: Good shelter available for small boats at river mouth or at creek 0.3 mile east.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to glacial debris.

PERSONAL-USE FISHERY: Heavy annual personal-use fishery at mouth.

FISH SPECIES: Dolly Varden, lake trout, grayling.

WILDLIFE SPECIES:

REMARKS: Usually two or more summer fish camps in vicinity of mouth.

C 68.6 KIJIK RIVER (Lake Clark)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1921	G 3.0				Few fish
1925	G				Natives took 1,600 fish, major portion of run
1926 9/3	G				Fish at mouth
1931 9/5	G 0.1				50 off mouth
1936 10/6	G				One-half of 1931 run
1947 10/16	A 3.0				Heavy run
1960 9/12	A 18.0	41,000	0		Estimate also for Little Kijik River
10/1	A 18.0	5,000	200		2,500 of live schooled
1962 9/27	A 18.0	3,200	6		Glacial, poor visibility

C 68.6:2.1R LITTLE KIJIK RIVER (Kijik River)

LOCATION: 60°18'12" N. 154°16'36" W.

PREVIOUS NAMES OR NUMBERS: Lla

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 0.6 mile

LENGTH ACCESSIBLE TO SALMON: 0.6 mile

AVERAGE WIDTH: 75' RANGE:

AVERAGE DEPTH: 18" RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 26,620 square yards (5.5 acres)

POTENTIAL SPAWNING AREA: 90%, 24,200 square yards (5.0 acres)

BOTTOM QUALITY: Good gravel throughout with scattered patches of rubble and bedrock.

WATERSHED: 34 square miles. A short glacial valley connecting Kijik Lake to Kijik River. Heavily forested with spruce, birch, and cottonwood. Bottom stable. Source: Kijik Lake.

GRADIENT:

WATER VELOCITY:

FLOW: 150 cfs (station and date of observation unknown) RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

C 68.6:2.1R LITTLE KIJIK RIVER (Kijik River)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 200-12,000

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 15-Oct. 15

DISTRIBUTION OF SPAWNERS: Spawning throughout river.

GENERAL INFORMATION

SHELTER: See Kijik River.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Passage along stream difficult due to brush.

PERSONAL-USE FISHERY: See Kijik River.

FISH SPECIES: Dolly Varden, lake trout, grayling.

WILDLIFE SPECIES:

REMARKS:

C 68.6:2.1R LITTLE KIJIK RIVER (Kijik River)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1952 9/16	A 0.6				Few fish
1953 9/4	A 0.6	3,000	0		
1954 9/7	A 0.6	200	0		
1955 9/13	A 0.6	500	0		
10/6	A 0.6	200	0		
1956 8/20	A 0.6	12,000	0		
9/6	A 0.6	10,000			
9/28	A 0.6	12,000	Few		
1957 9/20	A 0.6	6,500	0		
1959 9/20	A 0.6	300	0		
10/12	A 0.6	Few	0		
1961 8/30	A 0.6	5,000	0		
1962 9/27	A 0.6	3,900	100		Heaviest spawning in upper river

K 2.5W.;5.5E. KIJIK LAKE TRIBUTARIES (Kijik Lake)

LOCATION: 60°17'42" N. 154°19'30" W. west end; 60°19'00" N. 154°17'00" W. east end

PREVIOUS NAMES OR NUMBERS: Klc

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: Springs 400 yards, creek 8 miles

LENGTH ACCESSIBLE TO SALMON: Springs 400 yards, creek 8 miles

AVERAGE WIDTH: Spring 3', creek 10' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 48,480 square yards (10.0 acres)

POTENTIAL SPAWNING AREA: 100%, 48,480 square yards (10.0 acres)

BOTTOM QUALITY: Excellent gravel throughout.

WATERSHED: 32 square miles. Most areas adjacent to Kijik Lake. West end tributary flows through glacial valley heavily forested with spruce, birch, and cottonwood. Two springs at east end, three springs at west end. All areas stable. Beaver dams sometimes block creeks. Source: springs and surface runoff.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

K 2.5W;5.5E. KIJIK LAKE TRIBUTARIES (Kijik Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 110-5,000

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 15-Oct. 10 NE. end, Oct. 10-20 SW. end

DISTRIBUTION OF SPAWNERS: Heavy spawning in all tributaries.

GENERAL INFORMATION

SHELTER: See Kijik River.

SURVEY ROUTES AND METHODS: Aerial visibility good. All tributaries easily waded, ground surveys relatively easy.

PERSONAL-USE FISHERY: See Kijik River.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

K 2.5W.;5.5E KIJIK LAKE TRIBUTARIES (Kijik Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1920 Sept.	G W. end				No fish
1921	G W. end				Encouraging numbers
1926 9/4	G W. end				27,000 off mouth of four creeks
1931 9/5	G W. end				18,000 off mouth of creeks
1947 10/16	A W. end				Two schools in creek, one at mouth
1952 9/16	A all				Large numbers
1957 9/20	A all	850	0		
10/2	A all				5,000 off mouths of creeks
1959 9/20	A all	61	0		150 off mouth at W. end
10/12	A all	110	0		In largest pond at W. end
1960 10/1	A all			5,000	
1962 9/27	A W. end	160	5		
9/27	A E. end	1,017			Heavy density

C 89.1 TLIKAKILA RIVER (Lake Clark)

LOCATION: 60°22'36" N. 153°47'54" W.

PREVIOUS NAMES OR NUMBERS: 14, Big River

U.S.G.S. MAP: Lake Clark, Kenai, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 50.0 miles

LENGTH ACCESSIBLE TO SALMON: 50.0 miles

AVERAGE WIDTH: 300' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 7,688,924 square yards (1588.6 acres)

POTENTIAL SPAWNING AREA: 0%, 0 square yards

BOTTOM QUALITY: Bottom unstable.

WATERSHED: 650 square miles. A deep glacial valley heavily forested with spruce, birch, and cottonwood along valley floor, barren above. Subject to frequent severe flooding, glacial. Source: surface runoff and glaciers.

GRADIENT:

WATER VELOCITY: 1.5 fps (July 14, 1962). RANGE:
Measured at one channel.

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

C 89.1 TLIKAKILA RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 0%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Shelter available near mouth, mouth exposed to westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility nil due to glacial debris.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Fish racks reported several miles upstream.

C 89.1 TLIKAKILA RIVER (Lake Clark)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947 10/16	A 6.0		1		Seemingly poor spawning grounds
1959 10/12	A 10.0				No fish
1960 9/12	A 10.0				No fish
1962 11/24	A 50.0				No fish, river about 60% frozen over

C 98.5 CHOKOTONK RIVER (Lake Clark)

LOCATION: 60'26'00" N. 153°36'24" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 19.0 miles

LENGTH ACCESSIBLE TO SALMON: 19.0 miles

AVERAGE WIDTH: 100' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 1,114,652 square yards (230.3 acres)

POTENTIAL SPAWNING AREA: 0%, 0 square yards

BOTTOM QUALITY: Sand, silt, unstable.

WATERSHED: 294 square miles. A deep glacial valley heavily forested with spruce, birch, and cottonwood on valley floor, barren above. Subject to frequent severe flooding, glacial. Source: surface runoff and glaciers.

GRADIENT: 41'/mile

WATER VELOCITY: 2.0 fps (July 14, 1962)

FLOW: RANGE:

AIR TEMPERATURE: 13.0° C. (July 14, 1962)

WATER TEMPERATURE: 11.0° C. (July 14, 1962)

POOLS AND RIFFLES:

C 98.5 CHOKOTONK RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 0%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Spawning never observed.

GENERAL INFORMATION

SHELTER: Shelter only at mouth from all but westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility nil due to glacial debris.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

C 116.4 CURRANT CREEK (Lake Clark)

LOCATION: 60°18'12" N. 154°00'48" W.

PREVIOUS NAMES OR NUMBERS: I3

U.S.G.S. MAP: Iake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 19.3 miles

LENGTH ACCESSIBLE TO SALMON: 19.3 miles

AVERAGE WIDTH: 75' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

BOTTOM QUALITY: Sand, silt, unstable.

WATERSHED: 141 square miles. A glacial valley heavily forested with spruce, birch, and cottonwood. Subject to frequent severe flooding, glacial. Source: surface runoff and glaciers.

GRADIENT: 97'/mile

WATER VELOCITY: 2.0 fps (July 14, 1962). Measured 1,000 yards from mouth, normal summer flow.

FLOW: RANGE:

AIR TEMPERATURE: 15.0° C. (July 14, 1962)

WATER TEMPERATURE: 8.0° C. (July 14, 1962)

POOLS AND RIFFLES:

C 116.4 CURRANT CREEK (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 0%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Spawning reported in a section several miles from mouth.

GENERAL INFORMATION

SHELTER: Several sloughs near mouth offer good protection. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility nil due to glacial debris.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

C 133.6 TANALIAN RIVER (Lake Clark)

LOCATION: 60°12'00" N. 154°20'48" W.

PREVIOUS NAMES OR NUMBERS: I2

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 4.0 miles

LENGTH ACCESSIBLE TO SALMON: 3.6 miles

AVERAGE WIDTH: 100' RANGE:

AVERAGE DEPTH: 3' RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 211,024 square yards (43.6 acres)

POTENTIAL SPAWNING AREA: 10%, 21,296 square yards (4.4 acres)

BOTTOM QUALITY: Poor spawning facilities due to coarse bottom, some spawning in multichannel section of lower mile. Bottom fairly stable.

WATERSHED: 209 square miles. A glacial valley heavily forested with spruce, birch, and cottonwood. Subject to moderate flooding, channel changes frequent in lower mile. Source: Kontrashibuna Lake, 1.5 x 19 miles, glacial. A falls 3.6 miles from mouth impassable, falls gradually receding to lake.

GRADIENT:

WATER VELOCITY:

FLOW: 500-800 cfs (U.S.G.S.) RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

C 133.6 TANALIAN RIVER (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS: Some spawning in multichannel section of lower mile.

GENERAL INFORMATION

SHELTER: Excellent shelter available 2 miles northeast of river mouth. Mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to glacial debris. Falls accessible by trail from Port Allsorth.

PERSONAL-USE FISHERY: A personal-use fishery some years.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Port Allsworth (Tanalian Point), a settlement and airstrip, located 2 miles northeast of stream mouth.

C 133.6 TANALIAN RIVER (Lake Clark)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1920 Sept.	G				No fish
1922 Aug.	G				No count possible
1926 9/1	G 0.1				Fish schooled off mouth
1931 9/4	G				Fish schooled off mouth
1947 10/15	A				No fish
1955	A 4.0				No fish
1960 9/12	A 3.0				2,500 off mouth
10/1	A 4.0				
1961 8/30	A 4.0				Turbid

C 139.6 22 CREEK (Lake Clark)

LOCATION: 60°08'36" N. 154°28'00" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

TOTAL LENGTH: 5.5 miles

LENGTH ACCESSIBLE TO SALMON: 5.5 miles

AVERAGE WIDTH: 15' RANGE:

AVERAGE DEPTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA: 48,400 square yards (10.0 acres)

POTENTIAL SPAWNING AREA: 60%, 29,040 square yards (6.0 acres)

BOTTOM QUALITY:

WATERSHED: 10 square miles. A stream-cut valley heavily forested with spruce and birch, some cottonwood near mouth. Source: surface runoff.

GRADIENT:

WATER VELOCITY:

FLOW: RANGE:

AIR TEMPERATURE:

WATER TEMPERATURE:

POOLS AND RIFFLES:

C 139.6 22 CREEK (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING:

DISTRIBUTION OF SPAWNERS:

GENERAL INFORMATION

SHELTER: Uncertain, mouth exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility partially obscured by overhanging brush. Ground survey routes undetermined.

PERSONAL-USE FISHERY:

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

C 149.8 SUCKER BAY LAKE (Lake Clark)

LOCATION: 60°02'48" N. 154°39'00" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED:

AVERAGE WIDTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED:

BOTTOM QUALITY:

TOPOGRAPHY: Adjacent terrain flat barren lowland rising to mountains.

AIR TEMPERATURE:

WATER TEMPERATURE:

C 149.8 SUCKER BAY LAKE (Lake Clark)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 0-2,000

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Sept. 5-25

DISTRIBUTION OF SPAWNERS: Most spawning in lake, some spawning at mouth of creek draining lake.

GENERAL INFORMATION

SHELTER: Some shelter available at mouth of creek.

SURVEY ROUTES AND METHODS: Aerial visibility good.

PERSONAL-USE FISHERY: A personal-use fishery some years at mouth of creek.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

C 149.8

SUCKER BAY LAKE (Lake Clark)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1947	A all				Dead on shore in Sucker Bay
1957 9/25	A all		2,000		
1958 9/26	A all				No fish
1960 10/1	A all	0	1,500		
1962 9/27	A all	219	300		Approximate peak

I 109.3S KNUTSON BAY (Iliamna Lake)

LOCATION: 59°48'30" N. 154°10'00" W.

PREVIOUS NAMES OR NUMBERS: E7a

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 6,300'

AVERAGE WIDTH: 250' RANGE: 150'-500'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 184,889 square yards

BOTTOM QUALITY: Bottom gravel and loose sand, interspersed with scattered rock.

TOPOGRAPHY: Adjacent terrain south slope of Knutson Mountain, north slope of Pedro Mountain.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 109.3S KNUTSON BAY (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 10% or more (1960)

ESCAPEMENT RANGE: 3,000-1,000,000

TIME OF OCCUPANCY: Aug. 1-Nov.

PEAK OF SPAWNING: Sept. 15-Oct. 31

DISTRIBUTION OF SPAWNERS: Spawning along entire beach, heaviest at northeast corner. Spawning in different sections different times during season. Depth of spawning from 3'-110'.

GENERAL INFORMATION

SHELTER: Good shelter for small boats in old creek channel at southeast corner of bay. Beaches exposed to westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility limited to shallow water along beach.

PERSONAL-USE FISHERY: Annual personal-use fishery of varying intensity.

FISH SPECIES: Dolly Varden, rainbow, lake trout, whitefish.

WILDLIFE SPECIES:

REMARKS: No diving hazards. A cabin occupied by Fred Blayden located 200' from beach.

I 109.3S KNUTSON BAY (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1930	8/26	G all	16,000	0		Fish may be destined for creeks or spring ponds
1947	9/5	A all			5,000	
1948	9/8	A all				Fairly heavy concentrations, many schooled
1949	9/8	A all				Moderate spawning
1950	9/5	A all				Fair numbers, most schooled
1951	9/20	A all				Moderate spawning
1952	9/12	A all				A good concentration
1953	9/3	A all	10,000	0		Mostly schooled
	10/5	A all	10,000	0		
1954	9/6	A all		5,950		
1955	9/11	A all		2,500		
	10/5	G all	300	149		Survey from airplane
1956	8/17	A all	154,000	Few		Mostly schooled
	8/17	G				Measured ♂ 72, ♀ 80; scales ♂ 72, ♀ 80
	9/6	A all	155,000	Some		
1957	8/20	A all	20,000	Few		
	8/20	G				Measured ♂ 20, ♀ 20; scales ♂ 134, ♀ 178
	9/19	A all	21,500	Few		
	9/27	A all				Good numbers, some schooled

I 109.3S KNUTSON BAY (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
1958	8/10	G	all	15,000	Some		Measured ♂ 86, ♀ 94; scales ♂ 86, ♀ 94. Mostly schooled, some spawning
	8/28	A	all	14,000	0		95% schooled
	9/17	G	all	10,800	Some		Poor estimate, rough water
	9/24	A	all	1,500	0		Mostly spawning
	9/26	A	all	2,500	0		Schooled
1959	9/2	G	all				Measured ♂ 53, ♀ 56; scales ♂ 53, ♀ 56. No estimate
	9/6	A	all			3,000	
	9/11	G	all				Turbid, no estimate
	9/28	G	all				Turbid, no estimate
1960	8/28	A	all	1,000,000	Few		Tremendous spawning along entire east end, many places on north shore
	8/28	G					Scales ♂ 63, ♀ 80
	9/5	A		121,000	0		East end only, too rough for complete survey
	9/16	A	all	150,000	Few		
	9/23	A	all			40,000	
1961	9/13	A	all	50,000	Many		
	9/13	G					Scales ♂ 40, ♀ 40
1962	9/3	A	all	17,200	0		Schooled, peak in 2 weeks
	9/10	G					Measured ♂ 266, ♀ 299; scales ♂ 100, ♀ 100; otoliths ♂ 50, ♀ 50

I 138.6S LONESOME BAY (Iliamna Lake)

LOCATION: 59°47'18" N. 154°58'36" W.

PREVIOUS NAMES OR NUMBERS: E-4

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,350' for three beaches

AVERAGE WIDTH: 90' RANGE: 50'-150'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 13,500 square yards

BOTTOM QUALITY: Bottom of two beaches sand and rubble. Bottom of third beach gravel to 5".

TOPOGRAPHY: Adjacent terrain low rolling hills giving rise to mountains.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 138.6S LONESOME BAY (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: 300-17,000

TIME OF OCCUPANCY: Aug. 15-Sept. 30

PEAK OF SPAWNING: Sept. 10-20

DISTRIBUTION OF SPAWNERS: Spawning throughout creek, including mouth, but heaviest on eastern beach. Depth of spawning to at least 20'.

GENERAL INFORMATION

SHELTER: Good shelter for any boat at eastern beach or at head of bay.

SURVEY ROUTES AND METHODS: Aerial visibility good except when creeks flood. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None since abandonment of a village in early 1900's.

FISH SPECIES: Dolly Varden, rainbow, cisco.

WILDLIFE SPECIES:

REMARKS: Sunken trees and logs provide a potential hazard to diving and sledding.

I 138.6S LONESOME BAY (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 8/20	A all	1,200	0		
9/19	A all	3,000	0		
1958 8/28	A all	400	0		
9/16	A all	500	Some		Measured ♂ 12, ♀ 10; scales ♂ 14, ♀ 12
1959 9/6	A all				Heavy flood damage, fish present but not visible due to turbid water
9/12	G all	287	Few		Poor estimate, water turbid. Measured ♂ 13, ♀ 10; scales ♂ 13, ♀ 10
1960 8/28	A all	17,000	0		
9/5	A all				Poor visibility
9/23	A all	0	0		
1961 9/13	A all	400	Few		
1962 9/9	G				Measured, scales, otoliths ♂ 9, ♀ 17 respectively

I 160.4S FINGER BEACH NO. 1 (Iliamna Lake)

LOCATION: 59°43'42" N. 154°02'36" W.

PREVIOUS NAMES OR NUMBERS: D-6

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 600'

AVERAGE WIDTH: 100 RANGE: 30'-200'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 9,333 square yards

BOTTOM QUALITY: Bottom largely gravel and rubble overlain in places with 1"-3" of sand.

TOPOGRAPHY: Adjacent terrain low wooded hills giving rise to moutains.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 160.4S FINGER BEACH NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 300-19,000

TIME OF OCCUPANCY: Aug. 15-Oct. 10

PEAK OF SPAWNING: Sept. 10-30

DISTRIBUTION OF SPAWNERS: Spawning uniformly distributed along beach.

GENERAL INFORMATION

SHELTER: Good protection in bay from all winds, bight on east side of bay affords best shelter.

SURVEY ROUTES AND METHODS: Aerial visibility good. Conditions for boat survey favorable.

PERSONAL-USE FISHERY: A personal-use fishery some years.

FISH SPECIES: Dolly Varden, rainbow, lake trout, cisco.

WILDLIFE SPECIES:

REMARKS: No diving hazards. Ruins of a dwelling at head of bay.

I 160.4S FINGER BEACH NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
						Note: Estimates combined for Finger Beaches 1,2, and 3 unless otherwise noted
1956	9/6	A all	10,000	Few		Mostly spawning
	9/6	G				Measured ♂ 36, ♀ 42
1957	8/20	A all	7,500	0		Many schools in deep water
	9/18	A all	7,000	0		
	9/29	A all	4,000	1,000		
	9/29	G				Measured ♂ 68, ♀ 148; scales ♂ 20, ♀ 20
1958	8/28	A all	2,700			
	9/15	G all	750			Spawning in deep water at no. 2, unobserved from air
	9/26	A all	300	Few		
1959	9/6	A all	1,500	Few		Estimates for nos. 1 and 2
	9/7	G all	980	Few		Beach no. 1
			1,110	Few		Beach no. 2, in deep water
	9/30	G all	Few			
1960	8/28	A all	19,000	0		
	8/31	G all	4,000	500		Measured ♂ 160, ♀ 160; scales ♂ 160, ♀ 160
	9/5	A all		2,500		Several hundred schooled
	9/16			4,000		

I 160.4S FINGER BEACH NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1960 9/16			4,000		
9/23	A all		700		
1962 9/9	G				Measured ♂ 20, ♀ 23; scales ♂ 20, ♀ 23
9/27	A all	1,900	470		

I 159.5S FINGER BEACH NO. 2 (Iliamna Lake)

LOCATION: 59°43'42" N. 154°02'00" W.

PREVIOUS NAMES OR NUMBERS: D6

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 200' RANGE: 150'-200'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 31,111 square yards

BOTTOM QUALITY: Bottom 3"-6" rock becoming sand covered 100' offshore.

TOPOGRAPHY: Adjacent terrain low wooded hills giving rise to mountains.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 159.5S FINGER BEACH NO. 2 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: See Finger Beach No. 1.

TIME OF OCCUPANCY: Aug. 15-Oct. 10

PEAK OF SPAWNING: Sept. 10-30

DISTRIBUTION OF SPAWNERS: Spawning throughout, heaviest between 10' and 30'.

GENERAL INFORMATION

SHELTER: Bay at Beach No. 1 offers best protection for larger vessels, bay immediately east of beach offers good shelter for small boats.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible on calm days.

PERSONAL-USE FISHERY: See Finger Beach No. 1.

FISH SPECIES: Dolly Varden, rainbow, lake trout, ciscc.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 160.0S FINGER BEACH NO. 3 (Iliamna Lake)

LOCATION: 59°43' 42" N. 154°01'48" W.

PREVIOUS NAMES OR NUMBERS: D6

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 200' RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED:

BOTTOM QUALITY:

TOPOGRAPHY:

AIR TEMPERATURE:

WATER TEMPERATURE:

I 160.0S FINGER BEACH NO. 3 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1960)

ESCAPEMENT RANGE: See Finger Beach No. 1.

TIME OF OCCUPANCY: Aug. 15-Oct. 10

PEAK OF SPAWNING: Sept. 10-30

DISTRIBUTION OF SPAWNERS: Spawning throughout, heaviest between 10' and 30'.

GENERAL INFORMATION

SHELTER: Bay at Beach No. 1 offers best protection for larger vessels, bay immediately east of beach offers good shelter for small boats.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible on calm days.

PERSONAL-USE FISHERY: See Finger Beach No. 1.

FISH SPECIES: Dolly Varden, rainbow, lake trout, cisco.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 165.0S SOUTHEAST BEACHES (Iliamna Lake)

LOCATION: 59°43'18" N. 154°03'30" W.

PREVIOUS NAMES OR NUMBERS: D5

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 6.0 miles

AVERAGE WIDTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: Approximately 10,000 square yards concentrated in four areas.

BOTTOM QUALITY: Bottom predominantly loose gravel and large rock.

TOPOGRAPHY: Adjacent terrain low wooded hills rising to mountains.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 165.0S SOUTHEAST BEACHES (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1956)

ESCAPEMENT RANGE: 100-21,000

TIME OF OCCUPANCY: Aug. 15-Sept. 15

PEAK OF SPAWNING: Aug. 25-Sept. 5

DISTRIBUTION OF SPAWNERS: Scattered spawning along entire beach, concentrated spawning on deltas of four creeks.

GENERAL INFORMATION

SHELTER: Nearest shelter on south side of Porcupine Island 2 miles north.

SURVEY ROUTES AND METHODS: Aerial visibility fair. Boat surveys possible in calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 165.0S SOUTHEAST BEACHES (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1956	9/6	A all	11,000	10,000		50% of live spawning
1957	9/19	A all			500	
1958	8/28	A all	1,200	0		
	9/15	G all	121	Many		Numerous seal kills
1960	9/5	A all	Few	0		
	9/23	A all				No estimate, poor visibility
1961	9/13	A all	100	100		
1962	9/27	A all	200	60		Dark at depth

I 183.6S TOMMY BEACH (Iliamna Lake)

LOCATION: 59°36'54" N. 154°34'54" W.

PREVIOUS NAMES OR NUMBERS: D2

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 750'

AVERAGE WIDTH: 300' RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 25,000 square yards

BOTTOM QUALITY: Good gravel from 0.5"-5.0" throughout.

TOPOGRAPHY: Adjacent terrain flat wooded lowlands.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 183.6S TOMMY BEACH (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1957)

ESCAPEMENT RANGE: 260-3,000

TIME OF OCCUPANCY: Aug. 10-Oct.1

PEAK OF SPAWNING: Aug. 25-Sept. 30

DISTRIBUTION OF SPAWNERS: Spawning uniform over entire beach.

GENERAL INFORMATION

SHELTER: Excellent shelter for small boats in outlet slough of Tommy River. Beach exposed to all but southerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None since about 1920.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 183.6S TOMMY BEACH (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1957 8/28	G all	1,500	0		
9/6	G all	3,000	0		
9/25	A all				Live and dead present
1958 8/15	G all	350	0		
9/5	G all	270	0		
1959 8/21	G all	300	0		About 50% schooled
9/6	A all	450	0		50% schooled
1960 9/5	A all	2,000	0		50% schooled
9/23	A all				No estimate, poor visibility
1962 9/27	A all	200	60		Dark at depth

I 57.6:10.3 TRIANGLE NO. 3 (Iliamna Lake)

LOCATION: 59°43'48" N. 154°26'12" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 60' RANGE: 50'-75'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 28,444 square yards

BOTTOM QUALITY: Mostly 3"-6" rock, some coarser.

TOPOGRAPHY: Adjacent terrain a large knoll of moderate slope. Bedrock outcroppings along most of shoreline.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 57.6:I0.3

TRIANGLE NO. 3 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE: 1,300-9,000

TIME OF OCCUPANCY: July 31-Aug, 31

PEAK OF SPAWNING: Aug. 1-7

DISTRIBUTION OF SPAWNERS: Spawning heaviest between Triangle Island and small island immediately northeast. Other major areas along south side of first bay south of northeast corner of island and immediately south of Triangle Island anchorage. Depth of spawning 3'-20'.

GENERAL INFORMATION

SHELTER: Good temporary shelter from all winds, for long-term anchorage use bay on east side of island.

SURVEY ROUTES AND METHODS: Aerial visibility good on calm days. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, char, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 57.6:I0.3

TRIANGLE NO. 3 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/21	S all	9,000	Many		Measured ♂ 111, ♀ 115; scales ♂ 80, ♀ 80
1962 8/11	A all	1,300	0		Estimate for all Triangle Island beaches
8/31					Measured ♂ 74, ♀ 67; scales ♂ 74, ♀ 67; otoliths ♂ 50, ♀ 50

I 57.6:14.4 TRIANGLE NO. 1 (Iliamna Lake)

LOCATION: 59°43'12" N. 154°28'00" N.

PREVIOUS NAMES OR NUMBERS:

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 60' RANGE: 40'-150'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 11,556 square yards

BOTTOM QUALITY: Middle section composed of 2"-6" rock, large broken rock near east end, sediments appear at 30'.

TOPOGRAPHY: Adjacent terrain low rolling hills, almost entire length of beach adjacent to small pond.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 57.6:I4.4

TRIANGLE NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: July 21-Aug. 21

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning nearly uniform along entire beach during years of large abundance. Depth of spawning to 40'.

GENERAL INFORMATION

SHELTER: Fair protection for any boat in bay, exposed to northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good on calm days. Boat survey possible during calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, char, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 57.6:I4.4 TRIANGLE NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/19	S all	4,000	0		More dead than alive
1962 8/11	A all	1,300	0		Estimate for all Triangle Island beaches

I 57.6:I5.3 TRIANGLE NO. 2 (Iliamna Lake)

LOCATION: 59°43'30" N. 154°27'18" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,300'

AVERAGE WIDTH: 60' RANGE: 50'-100'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 11,778 square yards

BOTTOM QUALITY: Section composed of 2"-6" rock, bedrock and sediment begins offshore.

TOPOGRAPHY: Adjacent terrain low rolling hills, a small lake adjacent to west end of beach, northern exposure.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 57.6:I5.3 TRIANGLE NO. 2 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY: July 21-Aug. 31

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning concentrated east of solitary rock. Spawning mostly within 20' could go to 50'.

GENERAL INFORMATION

SHELTER: Protected from all but northerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good on calm days. Boat survey possible during calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Rainbow, char, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 57.6:I5.3

TRIANGLE NO.2 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/19	S all	5,500			

I 60.0:10.4 E-2 ISLAND (Iliamna Lake)

LOCATION: 59°43'00" N. 154°21'20" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 700'

AVERAGE WIDTH: 60'-70' RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 7,111 square yards

BOTTOM QUALITY: Bottom mostly 3"-6" rock, sediments after 40'.

TOPOGRAPHY: Adjacent terrain a barren island.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 60.0:I0.4 E-2 ISLAND (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1%

ESCAPEMENT RANGE:

TIME OF OCCUPANCY:

PEAK OF SPAWNING: Aug. 4-10

DISTRIBUTION OF SPAWNERS: Spawning uniform along beach to depth of 20', scattered spawning to depth of 40'.

GENERAL INFORMATION

SHELTER: Some shelter available from easterly winds.

SURVEY ROUTES AND METHODS: Aerial visibility good on calm days. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 63.0:I2.6 KNUTSON ISLANDS NO. 1 (Iliamna Lake)

LOCATION: 59°46'48" N. 154°19'42" W.

PREVIOUS NAMES OR NUMBERS:

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 50' RANGE: 40'-60'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 6,000 square yards

BOTTOM QUALITY: Bottom mostly large rock and boulder interspersed with smaller rock and gravel.

TOPOGRAPHY: Adjacent terrain low hills, rock bluff at water's edge.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 63.0:12.6 KNUTSON ISLANDS NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 500-2,500

TIME OF OCCUPANCY: July 25-Aug. 31

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning along entire beach in gravel patches and between boulders. Depth of spawning from 5'-20'.

GENERAL INFORMATION

SHELTER: Excellent shelter in small bay opening at east end of island.

SURVEY ROUTES AND METHODS: Aerial visibility excellent. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: Heavy surf a potential diving hazard if beach approached too closely.

I 63.0:I2.6 KNUTSON ISLANDS NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/24	S all	2,000	500		
1962 8/11	A all	500	0		

I 64.3:I12.5 FIAT ISLAND NO. 2 (Iliamna Lake)

LOCATION: 59°44'42" N. 154°14'48" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED:

AVERAGE WIDTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED:

BOTTOM QUALITY: Bottom mostly coarse gravel 1"-5".

TOPOGRAPHY: Adjacent terrain flat wooded islands.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I12.5 FLAT ISLAND NO. 2 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 1-4% (1955)

ESCAPEMENT RANGE: 50-43,400

TIME OF OCCUPANCY: Aug. 1-Sept. 30

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: Main spawning beaches on northeast side of Woody Island, spawning heaviest in area no. 1, scattered in areas 2 and 3.

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat available in numerous places.

SURVEY ROUTES AND METHODS: Aerial visibility poor. Boat survey possible during calm weather.

PERSONAL USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS: The Flat Island beaches encompass an area of approximately 3 square miles. Beaches 2 and 3 are located on the east side of Woody Island and Beach No. 1 on the west side of Porcupine Island. Each of the three areas is a complex of small islands and shoals between Woody and Porcupine Islands.

The beaches are so named because of a local custom which combines Woody and Porcupine Islands into "Flat Islands."

I 64.3:I12.5 FLAT ISIAND NO. 2 (Iliamna Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1924		G				No fish
1925		G			200	
1926	8/29	G			2,000	Spawning here always has been small, except for 1922.
1927	8/18	G	50			Schooled
1928	8/14	G				A few small schools seen
1955	10/5	A all				Definite evidence of spawning
1956	8/17	A all	43,400	Few		
	9/16	A all	Few	20,000		
1957	8/20	A all	3,700			
	8/19	A all	1,300	3,900		
1958	8/24	G				
	8/28	G				
	8/31	G	3,770			Estimate for three surveys conducted during August. Three surveys also conducted during September, but no estimates made.
1959	8/2	G	18,000	Some		Fish spread out, no spawning evident. Measured ♂ 100, ♀ 172; scales ♂ 70, ♀ 90
	9/2	G all	900	Many		Measured ♂ 80, ♀ 80; scales ♂ 80, ♀ 80
	9/6	A all	200			

I 64.3:I12.5 FLAT ISLAND NO. 2 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1960 8/28	A all	17,000	Few		
8/28	G				Measured ♂ 40, ♀ 40; scales ♂ 40, ♀ 40
1961 8/14	S	1,200	0		Area No. 1 surveyed
1962 8/11	A	500	0		Areas 1 and 2 surveyed

I 64.3:I16.4 FLAT ISLAND NO. 3 (Iliamna Lake)

LOCATION: 59°43'36" N. 154°15'30" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED:

AVERAGE WIDTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED:

BOTTOM QUALITY: Bottom mostly coarse gravel 1"-5"

TOPOGRAPHY: Adjacent terrain flat wooded islands.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I16.4 FLAT ISIAND NO. 3 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: See Flat Island No. 2.

ESCAPEMENT RANGE: See Flat Island No. 2.

TIME OF OCCUPANCY: Aug. 1-Sept. 30

PEAK OF SPAWNING: Aug. 15-30

DISTRIBUTION OF SPAWNERS: See Flat Island No. 2.

GENERAL INFORMATION

SHELTER: Excellent shelter available for any boat in numerous bays.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES:

WILDLIFE SPECIES:

REMARKS:

I 64.3:I22.3 SOUTHWEST WOODY NO. 1 (Iliamna Lake)

LOCATION: 59°43'42" N. 154°19'42" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 500'

AVERAGE WIDTH: 30' RANGE: 10'-60'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 2,222 square yards

BOTTOM QUALITY: Bottom 4"-6" rock

TOPOGRAPHY: Adjacent terrain flat, sparsely forested with spruce, cottonwood, alder along beach.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I22.3 SOUTHWEST WOODY NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 750 in 1961

TIME OF OCCUPANCY: July 21-Aug. 31

PEAK OF SPAWNING: Aug. 1-7

DISTRIBUTION OF SPAWNERS: Spawning in one main area plus two smaller areas on either side. Depth of spawning, 5'-20'.

GENERAL INFORMATION

SHELTER: Excellent shelter in bay east of spawning area.

SURVEY ROUTES AND METHODS: Aerial visibility excellent on calm days. Boat survey possible during calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cisco.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 64.3:I22.3 SOUTHWEST WOODY NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/15	S all	750	Few		Scales ♂ 20, ♀ 20, samples from all beaches

I 64.3:I24.1 SOUTHWEST WOODY NO. 2 (Iliamna Lake)

LOCATION: 59°44'00" N. 154°19'54" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'

AVERAGE WIDTH: 230' RANGE: 100'-250'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 30,918 square yards

BOTTOM QUALITY: Bottom largely 4"-6" rock to depth of 20', some sediments and boulder beyond 20'.

TOPOGRAPHY: See Southwest Woody No. 1.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I24.1 SOUTHWEST WOODY NO. 2 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 3,200-25,000

TIME OF OCCUPANCY: July 25-Aug. 30

PEAK OF SPAWNING: Aug. 1-7

DISTRIBUTION OF SPAWNERS: Spawning concentrated near middle of beach area 50'-100' offshore.

GENERAL INFORMATION

SHELTER: See Southwest Woody No. 1.

SURVEY ROUTES AND METHODS: Aerial visibility good, most of spawning area visible. Boat survey possible during calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cottids.

WILDLIFE SPECIES:

REMARKS:

I 64.3:I24.1 SOUTHWEST WOODY NO. 2 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/16	S all	25,000	Few		
1962 8/11	A all	3,200	0		

I 64.3:I24.5 SOUTHWEST WOODY NO. 3 (Iliamna Lake)

LOCATION: 59°44'12" N. 154°19'18" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,400'

AVERAGE WIDTH: 100' RANGE: 80'-250'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 22,464 square yards

BOTTOM QUALITY: Bottom largely 3"-6" rock, some larger rock and bedrock.

TOPOGRAPHY: A pond 100' x 500' adjacent to beach.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I24.5 SOUTHWEST WOODY NO. 3 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 200-11,000

TIME OF OCCUPANCY: July 25-Aug. 30

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning concentrated along northern 300' of beach. Depth of spawning from 3'-40' mostly within 20'.

GENERAL INFORMATION

SHELTER: Good protection from easterly winds, exposed to westerly winds, bight east of point affords some protection from westerly winds.

SURVEY ROUTES AND METHODS: Aerial visibility limited to shallow water along beach. Boat survey possible in calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 64.3:I24.5 SOUTHWEST WOODY NO. 3 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/17	S all	11,000	Few		
1962 8/11	A all	200	0		

I 64.3:I26.7 SOUTHWEST WOODY NO. 4 (Iliamna Lake)

LOCATION: 59°44'24" N. 154°17'24" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,650'

AVERAGE WIDTH: 60' RANGE: 30'-200'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 13,913 square yards

BOTTOM QUALITY: Bottom 2"-4" rock inshore, larger offshore

TOPOGRAPHY: See Southwest Woody No. 1.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I26.7 SOUTHWEST WOODY NO. 4 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 200-10,400

TIME OF OCCUPANCY: July 25-Aug. 31

PEAK OF SPAWNING: Aug. 1-7

DISTRIBUTION OF SPAWNERS: Heaviest spawning in middle of beach section. Depth of spawning from 5'-15'.

GENERAL INFORMATION

SHELTER: Excellent shelter for any boat.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible during calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards

I 64.3:I26.7 SOUTHWEST WOODY NO. 4 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/18	S all	10,000	400		
1962 8/11	A all	200	0		

I 64.3:I31.2 NORTHWEST WOODY NO. 1 (Iliamna Lake)

LOCATION: 59°45'42" N. 154°16'48" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 4,000'

AVERAGE WIDTH: 80' RANGE: 50'-200'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 35,556 square yards

BOTTOM QUALITY: Bottom mostly 2"-6" rock, some sediments and larger rock in deeper water.

TOPOGRAPHY: Adjacent terrain flat, lightly forested with spruce, alder, cottonwood along beach.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I31.2 NORTHWEST WOODY NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 2,000-16,400

TIME OF OCCUPANCY: July 25-Aug. 31

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning throughout, heaviest concentrations at westernmost bay. Depth of spawning from 3'-50', mostly within 25'.

GENERAL INFORMATION

SHELTER: Excellent shelter for boats of any size in bays at either end of beach.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cisco.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 64.3:I31.2 NORTHWEST WOODY NO. 1 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/19	S all	16,000	400		Measured ♂ 111, ♀ 153; scales ♂ 80, ♀ 80
1962 8/11	A all	2,000	0		
9/6	G				Measured ♂ 354, ♀ 266; scales ♂ 93, ♀ 100; otoliths ♂ 50, ♀ 50. Samples from east and west sides

I 64.3:I34.2 NORTHWEST WOODY NO. 2 (Iliamna Lake)

LOCATION: 59°45'42" N. 154°16'00" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 100'

AVERAGE WIDTH: 30' RANGE: 15'-40'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 1,111 square yards

BOTTOM QUALITY: Bottom 3"-6" rock

TOPOGRAPHY: See Northwest Woody No. 1.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 64.3:I34.2 NORTHWEST WOODY NO. 2 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: <1% (1961)

ESCAPEMENT RANGE: 1,500 in 1961

TIME OF OCCUPANCY: July 25-Aug. 31

PEAK OF SPAWNING: Aug. 7-14

DISTRIBUTION OF SPAWNERS: Spawning throughout, depth of spawning 5'-15'. Probably little or no spawning in this area in years of low abundance.

GENERAL INFORMATION

SHELTER: See Northwest Woody No. 1.

SURVEY ROUTES AND METHODS: Aerial visibility good. Boat survey possible on calm days.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cisco, cottids.

WILDLIFE SPECIES:

REMARKS: No diving hazards.

I 64.3:I34.2 NORTHWEST WOODY NO. 2 (Iliamna Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1961 8/19	S all	1,500	0		

I 69.6:I24.3 FLAT ISLAND NO. 1 (Iliamna Lake)

LOCATION: 59°44'12" N. 154°12'00" W.

PREVIOUS NAMES OR NUMBERS: E3

U.S.G.S. MAP: Iliamna, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED:

AVERAGE WIDTH: RANGE:

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED:

BOTTOM QUALITY: Bottom mostly gravel 1"-5"

TOPOGRAPHY: Adjacent terrain low forested hills.

AIR TEMPERATURE:

WATER TEMPERATURE:

I 69.6:I24.3 FLAT ISLAND NO. 1 (Iliamna Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: See Flat Island No. 2.

ESCAPEMENT RANGE: See Flat Island No. 2.

TIME OF OCCUPANCY: Aug. 1-Sept. 30

PEAK OF SPAWNING: Aug. 15-Sept. 1

DISTRIBUTION OF SPAWNERS: See Flat Island No. 2.

GENERAL INFORMATION

SHELTER: Shelter available in many places for boats of any size.

SURVEY ROUTES AND METHODS: Aerial visibility poor due to dark bottom. Boat surveys possible in calm weather.

PERSONAL-USE FISHERY: None reported.

FISH SPECIES: Dolly Varden, rainbow, cisco.

WILDLIFE SPECIES:

REMARKS: The main field station of Fisheries Research Institute is located on west side of Porcupine Island near the beach spawning areas.

G 14.0S GIBRALTAR NO. 1 (Gibraltar Lake)

LOCATION: 59°14'48" N. 154°38'30" W.

PREVIOUS NAMES OR NUMBERS: None

U.S.G.S. MAP: Iliamna, 1:250; Iliamna B-5, 1:63,360

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 1,000'-1,500'

AVERAGE WIDTH: 150'-200' RANGE: 100'-250'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 33,778 square yards

BOTTOM QUALITY: Bottom 3"-12" rock to depth of 20', smaller rock, some sediments beyond 20'.

TOPOGRAPHY: Adjacent terrain, low rolling hills.

AIR TEMPERATURE:

WATER TEMPERATURE:

G 14.08 GIBRALTAR NO. 1 (Gibraltar Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 1-4% (1960)

ESCAPEMENT RANGE: 30-76,000

TIME OF OCCUPANCY: Aug. 15-Oct. 15

PEAK OF SPAWNING: Sept. 5-15

DISTRIBUTION OF SPAWNERS: Spawning nearly uniform over entire beach. Depth of spawning from 5'-60'.

GENERAL INFORMATION

SHELTER: Little shelter available except eastern end, planes can land in nearly any part of lake during calm weather.

SUMMARY OF SURVEYS:

PERSONAL-USE FISHERY: See Gibraltar Creek.

FISH SPECIES: Lake trout.

WILDLIFE SPECIES:

REMARKS: No diving hazards. Only the one beach has been surveyed.

G 14.0S GIBRALTAR NO. 1 (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance		Live	Dead	Total	Remarks
							Note: Estimates are for all of Gibraltar Lake beaches.
1927	8/10	G	1.0				No fish in lake, 200 in outlet
1928	8/11	G	1.0			125,000	Fish in lower end, either spawn along shore or tributaries
1929	8/13	G	1.0				Less than half of last year
1947	9/11	A	all			1,000	Fish off west side creek above outlet and all along shore
1948	9/9	A	1.0				Fish on both sides at lower end
1951	9/20	A	all	300			Schooled at mouth of Trout Creek
1952	9/11	A	all				Schooled and spawning along south shore near outlet
1953	9/3	A	all			600	300 at each end
1954		A	all			30	Fish at upper end
1955	8/20	A	all	19,000	Few		
	9/6	A	all			10,200	Mostly in lower end
	9/9	A	all	7,000	Few		
1956	6/29	G	all	0	0		Numerous dead at upper end, probably from late spawners last winter
	8/20	A	all	20,000	0		

G 14.0S GIBRALTAR NO. 1 (Gibraltar Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1958	9/4	A all	650			Mostly schooled off creek mouths
1959	9/5	A all			1,700	
1960	8/28	A all	56,000			Mostly schooled
	9/5	A all	13,000			Mostly schooled
	9/16	A all	17,500	Few		Visibility poor
	9/23	A all	23,000	2,500		Some schools present
	9/29	A all	54,000	22,000		Few schooled, visibility poor
1961	9/2	S all	16,550	500		
	9/13	A all	14,550	500		
1962	9/27	A all	9,290	140		

K 5.5S KIJIK LAKE NO. 1 (Kijik Lake)

LOCATION: 60°19'12" N. 154°17'00" W.

PREVIOUS NAMES OR NUMBERS: Llb

U.S.G.S. MAP: Lake Clark, 1:250,000

PHYSICAL DESCRIPTION

LENGTH UTILIZED: 5,500'

AVERAGE WIDTH: 700'-800' RANGE: 50'-900'

TOTAL ACCESSIBLE SPAWNING AREA:

POTENTIAL SPAWNING AREA:

SPAWNING AREA UTILIZED: 533,333 square yards

BOTTOM QUALITY: Bottom mostly 0.5"-3" gravel, some sand near lower depth of spawning, about 60'.

TOPOGRAPHY: Adjacent terrain a low, heavily wooded flat, has a few springs.

AIR TEMPERATURE:

WATER TEMPERATURE:

K 5.5S KIJIK LAKE NO. 1 (Kijik Lake)

RED SALMON RUNS

PERCENT OF TOTAL KVICHAK ESCAPEMENT: 5-9% (1960)

ESCAPEMENT RANGE: 750-180,000

TIME OF OCCUPANCY: Aug. 15-Oct. 30

PEAK OF SPAWNING: Sept. 15-Oct. 1

DISTRIBUTION OF SPAWNERS: Heavy spawning throughout.

GENERAL INFORMATION

SHELTER: Planes can land in Kijik Lake in almost any weather.

SURVEY ROUTES AND METHODS: Aerial visibility good.

PERSONAL-USE FISHERY: See Kijik River.

FISH SPECIES: Lake trout, grayling, Dolly Varden.

WILDLIFE SPECIES:

REMARKS:

K 5.5S KIJIK LAKE NO. 1 (Kijik Lake)

SUMMARY OF SURVEYS

Date		Method & Distance	Live	Dead	Total	Remarks
1920	Sept.	G			Few	SW. end
1921		G				SW. end, good numbers
1922	8/23	G				SW. end, several thousand bright fish
1926	9/4	G	50,000	0		SW. end
1931	9/5	G	18,000	0		SW. end, at outlet of streams
1947	10/16	A all				Numerous
1952	9/16	A all				Possibly 100,000 fish spawning
1953	9/4	A all	8,500	0		
1954	9/7	A all	450	0		West end
			600	0		East end
1955	9/5	A all	950			
	9/13	A all	750	0		
1956	8/20	A all	7,000	0		
	9/6	A all	19,000	Few		
	9/28	A all	52,000	8,000		
1957	9/20	A all	20,500	Few		Measured ♂ 50, ♀ 73; scales ♂ 40, ♀ 40
	9/20	G				
1958	10/2	A all	1,000	0		All spawning at east end

K 5.5S KIJIK LAKE NO. 1 (Kijik Lake)

SUMMARY OF SURVEYS

Date	Method & Distance	Live	Dead	Total	Remarks
1959 9/20	A all	273	0		Turbid, more fish schooled in deep water
10/12	A all	3,500	75		West end
1960 9/12	A all	84,000	0		50% schooled
10/1	A all	175,000	5,000		Some schooled
1961 8/30	A all	25,000	0		Many schooled
1962 9/27	A all	4,004	20		West end, peak in one week
		9,300	60		East end

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